IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Jeff EDER

Serial No.: 09/764,068

Filed: January 19, 2001

For: A method of and system for defining and measuring the real options of a commercial enterprise

Group Art Unit: 3684

Examiner: J. Liversedge

Brief on Appeal

Sir or Madam:

The Appellant respectfully appeals the rejection of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 52, claim 53, claim 54, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 72, claim 73, claim 74 and claim 75 in the March 31, 2009 Office Action for the above referenced application. The Table of Contents is on page 2 of this paper.

The appeal brief is being sent in response to the notice of non compliant appeal brief mailed on December 15, 2009.

Table of Contents

1. Real party in interest

Asset Reliance, Inc. (dba Asset Trust, Inc.) is the Appellant and the owner of 100% interest in the above referenced patent application.

2. Related appeals

An Appeal for U.S. Patent Application 10/166,758 filed on June 12, 2002 may be affected by or have a bearing on this appeal. An Appeal for U.S. Patent Application 10/287,586 filed on November 5, 2002 may be affected by or have a bearing on this appeal.

3. Status of Claims

Claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 52, claim 53, claim 54, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 72, claim 73, claim 74 and claim 75 are rejected and are the subject of this appeal. Claims 37, 55, 67, 68, 72 and 75 are amended. Claims 1 through 35 and 66 were previously cancelled. The addition of claims to a co-pending application that cover similar subject matter has led to the cancellation of claim 70 and claim 71 herein to avoid double patenting objections.

4. Status of Amendments

An amendment/reply that contained amendments to correct clerical errors in claims 37, 55, 67, 68, 72 and 75 was filed on June 30, 2009 while prosecution was still open and was not incorporated herein because the Examiner refused to accept timely clerical error corrections.

5. Summary of Claimed Subject Matter

One embodiment of a detailed method of and system for defining and measuring the real options of a commercial enterprise according to the present invention is best depicted in Figures 1 through 7 of the specification for the instant application. Figure 1 gives an overview of the major processing steps which include transforming data from a plurality of disparate database management systems into an integrated database, analyzing the data as required to develop a model of enterprise market value by element of value and category of value and then using the model to analyze changes and produce reports.

<u>Independent claim 36</u> - One embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 36 where a computer implemented process prepares enterprise related data from a plurality of management systems

for use in processing and analyzes the data using a series of multivariate analyses in order to develop a model of enterprise market value by element and category of value. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137 and 138 and line 24, page 15 through line 11, page 17 of the specification.

a) *preparing data representative of an enterprise for use in processing* - data representative of the enterprise are prepared for use in processing by converting, integrating and storing the data in the application database (50) as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298,and line 1, page 14 through line 18, page 47 of the specification.

b) *transforming at least a portion of the data into a model of an enterprise market value by an element and category of value by completing a series of multivariate analyses that utilize said data* - the integrated data are then analyzed using a series of multivariate analyses in order to create a model of enterprise market value that identifies a tangible impact of each element of value on each category of value in accordance with the procedure detailed in FIG. 1, reference number 300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

c) *where the categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof* – the categories of value are described in several places including Table 1 on page 9 of the specification.

d) *where the model of enterprise market value identifies and outputs a tangible contribution of each element of value to each category of value* – the identification of a tangible contribution for each element of value is described in several places including line 18, page 11 through line 2, page 12 of the specification, and

e) *where the elements of value are selected from the group consisting of alliances, brands, channels, customers, employees, intellectual property, partnerships, processes, vendors and*

combinations thereof – the elements of value are described in several places including Table 1 on page 9 of the specification.

Claim 37 - The limitations and activities associated with dependent claim 37 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification. The output of the model is then analyzed and reported in accordance with the procedure detailed in FIG. 1 reference number 400, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 33, page 75 through line 30, page 77 of the specification and cross-referenced patent 5,615,109.

Claim 38 - The limitations associated with dependent claim 38 are described in several places including line 7, page 54 through line 5, page 56 and lines 21 through 33 of page 58 of the specification and FIG. 5B, block 615 and column 68, line 1 through line 5 of cross referenced U.S. Patent 5,615,109.

Claim 39 - The limitations associated with dependent claim 39 are described in several places including FIG. 6A reference number 302 - 312, FIG. 6B reference numbers 321, 323 and 325 - 332, FIG. 6C reference numbers 341 - 343, 345, 347 and 351 - 353 and line 20, page 47 through line 30, page 75 of the specification. The value of each element of value is then reported in accordance with the procedure detailed in FIG. 1 reference number 400, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 33, page 75 through line 30, page 77 of the specification and cross-referenced patent 5,615,109.

Claim 40 - The limitations associated with dependent claim 40 are described in several places including FIG. 6A reference number 306 and line 1 through line 4 on page 52 of the specification.

Claim 41 - The limitations associated with dependent claim 41 are described in several places including FIG. 1 reference number 5, 10, 12, 15, 25, 30, 35 and 37, line 10 through line 15 on page 14 and line 5 through line 15, page 27 of the specification.

Claim 42 - The limitations associated with dependent claim 42 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 43 - The limitations associated with dependent claim 43 are described in several places

including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 44 - The limitations associated with dependent claim 44 are described in several places including Table 15 on page 29 of the specification.

Claim 45 - The limitations associated with dependent claim 45 are described in several places including line 7, page 54, line 5, page 56 and lines 21 through 33 of page 58 of the specification and FIG. 5B, block 615 and column 68, line 1 through line 5 of cross referenced U.S. Patent 5,615,109.

Independent claim 46 - A second embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 46 where an article of manufacture instructs a computer system to prepare enterprise related data from a plurality of management systems for use in processing and analyze the data using a series of multivariate analyses in order to develop a model of enterprise market value by element and category of value. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137 and 138 and line 24, page 15 through line 11, page 17 of the specification.

a) preparing data representative of an enterprise for use in processing - data representative of the enterprise are prepared for use in processing by converting, integrating and storing the data in the application database (50) as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298,and line 1, page 14 through line 18, page 47 of the specification.

b) transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a current operation and a real option category of value - the integrated data are then analyzed using a series of multivariate analyses in order to create a

model of enterprise market value that identifies a tangible impact of each element of value on each category of value in accordance with the procedure detailed in FIG. 1, reference number 300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352   and 353, Table 1 on page 9, line 18, page 11 through line 2, page 12 and line 20, page 47 through line 30, page 75 of the specification.

c) reporting the value contribution of the elements of value using an electronic display or a paper document - the value of each element of value is reported in accordance with the procedure detailed in FIG. 1 reference number 400, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 33, page 75 through line 30, page 77 of the specification.

<u>Claim 47</u> - The limitations associated with dependent claim 47 are described in several places including Table 1, page 9 and line 5 through line 15, page 27 of the specification.

<u>Claim 48</u> - The limitations associated with dependent claim 48 are described in several places including FIG 6C reference number 347 and line 22, page 70 through line 20, page 71 of the specification.

<u>Claim 49</u> - The limitations associated with dependent claim 49 are described in several places including FIG 6B reference number 331 and line 25, page 63 through line 20, page 65 of the specification.

<u>Claim 50</u> - The limitations associated with dependent claim 50 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

<u>Claim 51</u> - The limitations associated with dependent claim 51 are described in several places including Table 32 on page 64 of the specification.

<u>Claim 52</u> - The limitations and activities associated with dependent claim 52 are described in several places including FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 10, page 56 through line 30, page 75 of the specification.

<u>Claim 53</u> - The limitations associated with dependent claim 53 are described in several places including line 8, page 30 through line 15, page 30 of the specification.

<u>Claim 54</u> - The limitations associated with dependent claim 54 are described in several places including FIG 6A reference number 309 and line 15, page 54 through line 20, page 55 of the specification.

<u>Independent claim 55</u> - A third embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 55 where a computer implemented process prepares enterprise related data from a plurality of management systems for use in processing and transforms the data into causal models of the categories of value. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137 and 138 and line 24, page 15 through line 11, page 17 of the specification.

a) preparing data representative of an enterprise for use in processing - data representative of the enterprise are prepared for use in processing by converting, integrating and storing the data in the application database (50) as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298,and line 1, page 14 through line 18, page 47 of the specification.

b) transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that calculate and output a tangible value contribution of each of one or more elements of value to a future market value and each of the categories of organization value- the integrated data are then analyzed using a series of multivariate analyses in order to create causal category of value models that identify a tangible impact of each element of value on each category of value in accordance with the procedure detailed in FIG. 1, reference number 300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

c) where the categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof – the categories of value are described in several places including Table 1 on page 9 of the specification.

d) *where the elements of value are selected from the group consisting of alliances, brands, channels, customers, employees, intellectual property, partnerships, processes, vendors and combinations thereof* – the elements of value are described in several places including Table 1 on page 9 of the specification.

<u>Claim 56</u> - The limitations associated with dependent claim 56 are described in several places including Table 15 on page 29 of the specification.

<u>Claim 57</u> - The limitations associated with dependent claim 57 are described in several places including FIG. 1, reference number 200 and 300, FIG. 5A reference numbers 201 - 204, 207 – 209 and 211 FIG. 5B reference numbers 221 – 222, 225 – 226, 209 and 211, FIG. 5C reference numbers 241 – 242, 245 – 246, 209 and 211, FIG. 5D reference numbers 261 – 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268 – 269, 272, 278 - 279 and 281 - 282, FIG. 5F reference numbers 291 - 298, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20 and line 1, page 14 through line 30, page 75 of the specification.

<u>Claim 58</u> - The limitations associated with dependent claim 58 are described in several places including FIG 6C reference number 347 and line 22, page 70 through line 20, page 71 of the specification.

<u>Claim 59</u> - The limitations associated with dependent claim 59 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

<u>Claim 60</u> - The limitations associated with dependent claim 60 are described in several places including FIG 6C reference number 347 and line 22, page 70 through line 20, page 71 of the specification.

<u>Claim 61</u> - The limitations associated with dependent claim 61 are described in several places including table 1, page 9 of the specification.

<u>Claim 62</u> - The limitations associated with dependent claim 62 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C

reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 63 - The limitations associated with dependent claim 63 are described in several places FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 20, page 47 through line 30, page 77 of the specification and cross-referenced patent 5,615,109.

Independent claim 64 - A fourth embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 64 where a computer implemented process uses independent components of application software to transform data that has been integrated from a plurality of management systems in accordance with a common model or xml schema into a predictive model. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137 and 138 and line 24, page 15 through line 11, page 17 of the specification.

a) using two or more independent components of application software to produce one or more useful results by transforming data representative of a physical object or substance into a predictive model that has a utility in managing or monitoring a real world activity of said object or substance - data are processed in accordance with the procedure detailed in FIG. 1, reference number 300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

b) where said data has been aggregated from two or more systems in accordance with a common model or schema defined by an xml metadata standard. - data from the database management systems associated with a plurality of systems are converted, integrated and stored in accordance with a common model or schema defined by xml metadata as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers

291, 292, 293, 294, 295, 296, 297 and 298,and line 1, page 14 through line 18, page 47 of the specification.

Claim 65 - The limitations associated with dependent claim 65 are described in several places including FIG. 6A reference numbers 308 - 311 and line 30, page 53 through line 20, page 56 of the specification.

Claim 67 - The limitations associated with dependent claim 67 are described in several places including FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 1, page 14 through line 30, page 75 of the specification.

Claim 68 - The limitations associated with dependent claim 68 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 69 - The limitations associated with dependent claim 69 are described in several places including FIG. 1 reference number 5, 10, 12, 15, 25, 30, 35 and 37, line 10 through line 15 on page 14 and line 5 through line 15, page 27 of the specification.

Independent claim 72 - A fifth embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 72 where a machine prepares data from a plurality of management systems for use in processing and analyzes the data in order to identify a contribution of each element of value to each category of value. The identified contributions are then reported in a balance sheet format. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

a) a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to complete a computer implemented market value accounting method - the computer is described in FIG. 3, reference numbers 100, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120,

121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137 and 138 and line 24, page 15 through line 11, page 17 of the specification.

b) preparing data representative of an organization for use in processing - data representative of the organization are prepared for use in processing by converting, integrating and storing the data in the application database (50) as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298,and line 1, page 14 through line 18, page 47 of the specification.

c) transforming at least a portion of the data into a model of each of one or more categories of an organization value that identify and output a tangible contribution of each of one or more elements of value to the categories of organization value by completing a series of analyses where the categories of value further comprise a current operation category of value and a category of value selected from the group consisting of real option, market sentiment and combinations thereof, - the integrated data are then analyzed using a series of multivariate analyses in order to create a model of enterprise market value that identifies a tangible impact of each element of value on each category of value in accordance with the procedure detailed in FIG. 1, reference number 300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353, Table 1 on page 9 and line 20, page 47 through line 30, page 75 of the specification.

d) using the tangible contribution for each element of value to identify a market value for each element of value and report the value of each element of value in a balance sheet format – the calculation and display of the valuations for the elements of value is described in FIG. 7, reference number 402 and line 1 through line 13, page 76 of the specification.

e) where the reported value is a value for a specific point in time within a sequential series of points in time – the time period is set by the system date as described on line 8, page 30 through line 15 of the specification.

Claim 73 - The limitations associated with dependent claim 73 are described in several places including table 1, page 9, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 33, page 75 through line 30, page 77 of the specification.

Claim 74 - The limitations associated with dependent claim 74 are described in several places

including FIG. 5A reference numbers 202 and 203, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407, line 8, page 30 through line 33, page 30 and line 33, page 75 through line 30, page 77 of the specification.

Claim 75 - The limitations associated with dependent claim 75 are described in several places including Table 1 on page 9 of the specification.

6. Grounds of rejection to be reviewed on appeal

Issue 1 - Whether claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45, are patentable under 35 USC §103(a) over "Premium Drivers of Post Deal Value" in Mergers and Acquisitions (hereinafter, Bielinski) alone, in view of "The 1986-88 Stock Market: Investor Sentiment or Fundamentals?" (hereinafter, Baur), in view of Baur and U.S. Patent 6,192,354 (hereinafter, Bigus) or in view of Baur and U.S. Patent 4,989,141 (hereinafter, Lyons)?

Issue 2 – Whether claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63 are patentable under 35 USC §103(a) over Bielinski alone, in view of Baur, in view of Baur and Bigus or in view of Baur and Lyons?

Issue 3 – Whether claim 72, claim 73, claim 74, claim 75 and claim 47 are patentable under 35 USC §103(a) over Bielinski alone, in view of Baur, in view of Baur and Bigus or in view of Baur and Lyons?

Issue 4 - Whether claim 49, claim 50, claim 51 and claim 52 are patentable under 35 USC §103(a) over Bielinski in view of "Get Real" (hereinafter, Mauboussin) or in view of U.S. Patent 5,245,696 (hereinafter, Stork)?

Issue 5 – Whether claim 64, claim 65, claim 67, claim 68 and claim 69 are patentable under 35 USC §103(a) over U.S. Patent 7,249,328 (hereinafter, Davis) in view of Bielinski, in view of U.S. Patent 6,549,922 (hereinafter, Srivastava) or in view of "Building Customer and Shareholder Value" (hereinafter, Cleland)?

Issue 6 - Whether claim 46, claim 48, claim 53 and claim 54 are anticipated under 35 USC §102(b) by Bielinski?

Issue 7 - Whether the invention described in claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 72,

claim 73 and claim 74 represents statutory subject matter under USC §101?

Issue 8 – Whether the invention described in claim 64, claim 65, claim 67, claim 68 and claim 69 are enabled under 35 USC §112, first paragraph?

Issue 9 – Whether claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63 are indefinite under 35 USC §112, second paragraph?

7. The Argument

For each ground of rejection which Appellant contests herein which applies to more than one claim, such additional claims, to the extent separately identified and argued below, do not stand and fall together.

Issue 1 - Whether claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45 are patentable under 35 USC §103(a) over Bielinski alone or in view of Baur, in view of Baur and Bigus or in view of Baur and Lyons?

The claims are patentable because the claim rejections are based on several hundred errors in the facts and in the law. Because of these errors, the cited combination of teachings (Bielinski, Baur, Bigus and Lyons) and the arguments related to the cited combination of teachings fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

<u>Errors 1 through 14</u> – It is well established that: "*in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983))."* Furthermore, it is well established that: *A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).* Errors in the claim rejections caused by the failure to acknowledge the fact that all the cited references teach away from the invention described in claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45 include:

<u>Error #1)</u> Is a failure to acknowledge that Bielinski teaches away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Bielinski, which is the primary reference for all obviousness rejections, teaches and relies on the VBM method of discounted cash flow modeling. VBM uses Shareholder Value Analysis principles (hereinafter, SVA) such as a tree based model of cash flow, but advances the technique by using historical data, operations linked value drivers and concurrent changes in multiple value

drivers. In accordance with the VBM/SVA method, most of the tree is used for calculating the actual cash flow for prior periods. The remainder of the tree is used for determining the cost of capital used to discount the cash flow. Putting the two parts of the tree together, the VBM method teaches that the only way to increase enterprise value is to increase the value of period cash flow (see Bielinski and Evidence Appendix, pages 100 – 102). By way of contrast, the claimed invention teaches that as many as three categories of value determine the value of an enterprise as shown in the table. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Categories of value per 09/764,068	Categories of value per Bielinski
1. Current operation (cash flow), 2. Market sentiment, and 3. Real options.	1. Cash flow (current operation)

Error #2) Is a failure to acknowledge that Baur teaches away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Baur focuses exclusively on the correlation between investor sentiment and weekly price changes for the stocks included in the S&P 500 index. As is well known in the art, share prices reflect the combined value of all the categories of value in an enterprise. In particular, Baur teaches that investor sentiment is an external factor that affects share prices (and all the categories of value) instead of being a separate category of value that has a value that is a function of element of value performance as claimed. By exclusively teaching methods that teach away from the claimed invention, Baur provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Error #3) Is a failure to acknowledge that Lyons teaches away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Lyons teaching modeling financial performance by manipulating traditional financial schedule information. As is well known in the art, the traditional financial schedules Lyons relies on exclude two of the three categories of value (real options and market sentiment). By exclusively teaching methods that teach away from the claimed invention, Lyons provides

additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Error #4) Is a failure to acknowledge that Bielinski teaches away from the claimed analysis and modeling of enterprise financial performance by element of value. Bielinski teaches VBM that relies on SVA principles (including the use of a single tree of equations) to calculate an enterprise value from historical cash flow. The portion of the tree used for calculating historical cash flow is built by joining together a series of nodes where the inputs to each node are mathematically combined to produce a node output that becomes an input to a node at a higher level in the tree. The inputs to the VBM/SVA cash flow tree consist of: activity measures (i.e. volume of calls received, number of transactions completed and pounds of material used), counts (i.e. number of service delivery centers and number of employees), expenditure data (i.e. material costs, employee annual salary and cost per station), and summary financial measures (i.e. inventory turnover ratio and sales growth rate) These inputs mathematically combine to produce the summary accounting numbers used for calculating the historical cash flow. None of the VBM inputs teach or suggest an "element of value" as defined in the written description. By way of contrast, the claimed invention teaches that elements of value drive current operation cash flow and the other categories of value and that statistical summaries of element of value performance are the only inputs to the models of each category of value – including the current operation model.

Aspect of financial performance	Designation per 09/764,068	Designation per Bielinski
Raw material cost	Sub-component of expense value	Operational value driver
Production labor cost	Sub-component of expense value	Operational value driver

Consistent with the different teachings regarding the drivers of enterprise financial performance, Bielinski teaches a different definition of the term "value driver" and defines several sub-components of expense value as operational value drivers (see Table). By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Error #5) Is a failure to acknowledge that Bielinski teaches away from the claimed multivariate statistical analysis of enterprise financial performance. Bielinski teaches a method that calculates the actual amount of enterprise cash flow (see Bielinski, Table 1). By teaching a reliance on actual numbers, Bielinski teaches away from the claimed multivariate statistical

analysis. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Error #6) Is a failure to acknowledge that Bielinski teaches away from analyzing employees and processes as elements of value that contribute to the value of one or more categories of value. Contrary to the statement made in the March 31, 2009 Office Action, Bielinski does not teach the analysis of alliances, employee, partners, processes and/or vendors as elements of value (or anything of the listed elements of value). None of these elements of value are mentioned or suggested in the Bielinski document. Bielinski does mention human resource costs, material costs and scrap costs and as such teaches that human resources and processes that use materials are liabilities that should be minimized and not elements of value contribute to the value of the categories of value. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Error #7) Is a failure to acknowledge that Bielinski teaches away from the claimed method of analyzing enterprise financial performance by teaching and relying on different assumptions regarding the relationship between input values and cash flow value. Bielinski teaches that inputs have a linear relationship to the value of cash flow. By way of contrast, the claimed invention teaches that inputs may have a linear or non-linear effect on the value of the categories of value. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Error #8) Is a failure to acknowledge that Bielinski teaches away from the claimed method of analyzing enterprise financial performance by teaching and relying on different assumptions regarding market efficiency. In accordance with SVA principles, Bielinski teaches that the market is strong form, efficient (aka standard valuation model) and that market sentiment value is zero. By way of contrast, the claimed invention does not make any assumptions about market efficiency. Accordingly, the market may be strong form, efficient (market sentiment value is zero) or it may be inefficient (market sentiment value may be above or below zero). By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Error #9) Is a failure to acknowledge that Lyons teaches away from the claimed analysis of element of value contribution to the value of one or more categories of value. Lyons focuses exclusively on manipulating traditional financial statements which (as is well known in the art) rely on the book value of assets instead of valuing an asset based on its contribution to one or more categories of value. Furthermore, traditional financial statements exclude many if not all of the claimed elements of value: alliances, brands, channels, customers, employees, intellectual property, partnerships, processes and vendors. By exclusively teaching methods that teach away from the claimed invention, Lyons provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Error #10) Is a failure to acknowledge that Baur teaches away from the claimed analysis of element of value contribution to the value of one or more categories of value. Baur focuses exclusively on the correlation between investor sentiment and weekly price changes for the S&P 500 (see Evidence Appendix, pages 91 through 94). Share prices reflect the combined contribution of all the elements of value in an enterprise. In particular, Baur teaches that external factors such as investor sentiment affect share prices (and all the categories of value). By way of contrast, the claimed invention teaches that the elements of value affect the categories of value and share prices. By exclusively teaching methods that teach away from the claimed invention, Baur provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Error #11) Is a failure to acknowledge that Lyons teaches away from the claimed method of preparing data. Lyons describes an invention that allows each user to define and produce financial reports. In particular, each user is free to define the terms used in the financial reports (see Lyons, Column 8, Lines 64 and 65 and Column 9, Line 13) at any point in the report definition process.   By way of contrast, the claimed invention teaches and relies on the use of a single common definition for all the aspects of financial performance being analyzed. By exclusively teaching methods that teach away from the claimed invention, Lyons provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Error #12) Is a failure to acknowledge that Bielinski teaches away from the claimed method of optimizing an enterprise value. Bielinski teaches the use of sensitivity analysis and break even analysis to identify desirable changes in operation (see Bielinski, Table 2 and Table 3). By way of contrast, the claimed invention teaches and relies on the use of optimization

analyses to identify the most valuable set of changes in a business operation. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 37 and claim 38.

Error #13) Is a failure to acknowledge that Bigus teaches away from the claimed method of optimizing an enterprise value. The purpose of the Bigus invention is to optimize the performance of a computer task by selecting the single best agent for the task. By way of contrast, the claimed invention teaches and relies on the use of optimization analyses to identify the most valuable set of changes in a business operation. By exclusively teaching methods that teach away from the claimed invention, Bigus provides additional evidence of the novelty, non-obviousness and newness of claim 37 and claim 38.

Error #14) Is a failure to acknowledge that Bielinski teaches away from the claimed method of quantifying and optimizing a future enterprise market value. Bielinski teaches away from the use of projections that are required for a future value optimization analysis by teaching a strict reliance on five years of historical cash flow. Bielinski also teaches away from the claimed optimization analysis method as discussed under errors 111 and 112. By way of contrast, the claimed invention teaches the use of forecasts (aka projections) as part of a market value optimization analysis. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 37 and claim 38.

Error #15) Is a failure to acknowledge the fact that Bielinski teaches away from the use of a predictive model by teaching a reliance on simple mathematical combinations of actual numbers. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 40 and claim 43.

Because the cited documents all exclusively teach methods that teach away from the claimed methods, the prima facie case of obviousness cannot be properly established.

Errors 16 through 65 – It is well established that "when determining whether a claim is obvious, an examiner must make 'a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.' In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, 'obviousness requires a suggestion of all limitations in a claim.' CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974)) Furthermore, the Board of Patent Appeal and Interferences recently confirmed (In re Wada and Murphy, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination

still requires that an examiner must make "a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art." In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). In other words, obviousness still requires a suggestion of all the limitations in a claim. Errors in the claim rejections caused by the apparent failure to acknowledge the fact that the cited documents do not teach one or more limitations of the claimed invention include:

Errors #16 through #27) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 36 (affects claims 37, 38, 39, 40, 41, 42, 43, 44 and 45), including:

a) transforming at least a portion of the data into a model of an enterprise market value by an element of value by completing a series of multivariate analyses that utilizes said data (#16),

b) transforming at least a portion of the data into a model of an enterprise market value by category of value by completing a series of multivariate analyses that utilizes said data (#17),

c) categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof (#18),

d) a model of enterprise market value identifies and outputs a tangible contribution of each element of value to each category of value (#19),

e) alliance elements of value (#20),

f) brand elements of value (#21),

g) channel elements of value (#22),

i) employee elements of value (#23),

j) intellectual property elements of value (#24),

k) partnership elements of value (#25),

l) process elements of value (#26), and

m) vendor elements of value (#27).

Errors #28 through #32) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 37, including:

a) identifying a set of changes that will optimize an enterprise market value (#28),

b) quantifying a future enterprise market value (#29),

c) valuing an enterprise market sentiment (#30),

d) calculating a real option discount rate (#31), and

e) valuing a real option (#32).

Errors #29 through #35) Is a failure to acknowledge the fact that the cited documents do not

teach or suggest one or more limitations of claim 38, including:

a) identifying one or more changes that will optimize revenue (#29),

b) identifying one or more changes that will optimize expense (#30),

c) identifying one or more changes that will optimize capital change (#31),

d) identifying one or more changes that will optimize real option value (#32),

e) identifying one or more changes that will optimize future market value (#33),

f) identifying one or more changes that will optimize market sentiment value (#34), and.

g) identifying one or more changes that will optimize one or more aspects of financial performance where said aspects of financial performance are selected from the group consisting of revenue, expense, capital change, cash flow, real option value, future market value, market sentiment value, market value and combinations thereof (#35).

Errors #36 through #55) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 39, including: *completing a series of multivariate analyses (#36), identifying one or more previously unknown item performance indicators (#37), discovering one or more previously unknown value drivers (#38), identifying one or more previously unknown relationships between one or more value drivers (#39), identifying one or more previously unknown relationships between one or more elements of value (#40), quantifying one or more inter-relationships between value drivers (#41), quantifying one or more impacts between elements of value (#42), developing one or more composite variables (#43), developing one or more vectors (#44), developing one or more causal element impact summaries (#45), identifying a best fit combination of a predictive model algorithm and one or more element of value impact summaries for modeling enterprise market value (#46) and each of the components of value (#47 - #49), determining a net element impact for each category of value (#50), determining a relative strength of the elements of value between two or more enterprises (#51), developing one or more real option discount rates (#52), calculating one or more real option values (#53), calculating an enterprise market sentiment value by element (#54) and combinations thereof (#55).*

Errors #56 through #59) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 41, including: *where data are obtained from web site systems (#56), the Internet (#57), external databases (#58) and combinations thereof (#59).*

Error #60) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 42, including: *using one or more composite*

applications to complete the processing.

Errors #61 through #63) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 43, including: *a real option discount rate model (#61), a real option valuation model (#62), a market sentiment model by element of value (#63) and combinations thereof.*

Error #64) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 44, including: *integrating data in accordance with a common schema where the common schema is defined by a CORBA metadata or an xml metadata.*

Error #65) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 45, including: *identifying one or more changes that will optimize a future market value portion of said enterprise market value.*

Errors 66 through 69 - It is well established that when "*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*". Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Bielinksi invention would have to be changed to replicate the functionality of the claimed invention, include:

Error #66) One principle of operation that Bielinski relies on is the standard model which teaches that cash flow is the sole determinant of enterprise value. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that enterprise value includes a number of categories of value (i.e. real options, market sentiment) that are not included in the standard model (see Evidence Appendix, pages 100 - 102). Affects all claims.

Error #67) A second principle of operation that Bielinski relies on is the use of the actual prior period cash flow to calculate an enterprise value (see Bielinkski and Evidence Appendix, pages 100 - 102). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions rely on a series of multivariate statistical analyses where the only inputs are element of value impact summaries and the primary outputs are between one and zero (category valuations are determined separately). Furthermore, the models for calculating category valuations rely on forecasts which are prohibited by Bielinski. Changing to a series of analyses using statistical models for identifying relative contributions

and separate models for calculating category valuations using forecasts would be a change in another principle of operation of the Bielinski invention. Affects all claims.

Error #68)   A third principle of operation that Bielinski teaches and relies on is that activities, counts, expenditures and summary measures determine cash flow and that value drivers are high level summaries of enterprise financial performance (i.e. operating profit margin). Bielinski also teaches that operational value drivers are sub-components of expense value (i.e. raw material cost, human resource cost), and/or summary financial statistics (inventory turnover and sales growth percentage). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions teach and rely on the fact that elements of value drive cash flow (and other segments of value) and that value drivers are characteristics of elements of value. Affects all claims.

Error #69)   A fourth principle of operation that Bielinski teaches and relies on is that analyses of cash flow only require consideration of the factors that can be used to calculate an actual cash flow.   By way of contrast, the claimed invention teaches and relies on the fact that elements of value may have an indirect and/or non linear impact on cash flow and/or a category valuation.   The fourth principle of operation would have to be changed to add a consideration of the factors that have an indirect and/or non-linear relationship to cash flow to the analysis method taught by Bielinski.

Because the required modification of Bielinski would change at least four of its principles of operation, the prima facie case of obviousness cannot be properly made.

Errors 70 through 72 - Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Baur, Bigus and Lyons inventions would have to be changed to replicate the functionality of the claimed invention, include:

Error #70) One principle of operation Baur relies on is that investor sentiment is a factor that may have an impact on share prices.   This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that market sentiment is a category of enterprise value and that market sentiment has a value that is a function of element of value performance and its value is not a function of investor feelings (see Evidence Appendix, pages 91 - 94). Affects all claims.

Error #71) One principle of operation that Bigus relies on is that agents or program modules are selected in order to optimize the performance of computer tasks (see Bigus, abstract). This principle of operation would have to be change to replicate the functionality of the claimed

invention that selects a set of changes that will optimize organization financial performance. Another principle of operation that Bigus relies on is the identification and exclusive use of the one best agent or module (see Bigus Column 8, Line 14) from a plurality of agents or modules. This principle of operation would also have to be changed to replicate the functionality of the claimed invention and recognize the fact that a plurality of agents (or bots) for performing the same function in alternate manners are in continual use. Affects all claims.

Error #72) One principle of operation that Lyons relies on is that each user is free to define the terms used in the reports created with the support of the Lyons invention. In particular, Lyons teaches that each user is free to define the terms used in financial reports at any point in the report definition process (see Lyons, Column 8, Lines 64 and 65 and Column 9, Line 13). By way of contrast, the claimed invention teaches and relies on the use of a single common definition (aka a common schema) for all the aspects of financial performance being analyzed. Changing Lyons to rely on the claimed use of common definitions would be a change in the principle of operation of the Lyon's invention. Affects all claims.

Because the required modification of Baur, Bigus and Lyons would change one or more of their principles of operation, the prima facie case of obviousness cannot be properly made.

Errors 73 and 74 - It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984).* Errors in the claims rejections caused by the failure to acknowledge that the functionality of the Bielinski invention would be destroyed if it was modified to replicate the functionality of the claimed invention, include:

Error #73) The claimed computational model of enterprise market value by element of value and category of value comprises predictive models up to two categories of value, the current operation and/or market sentiment categories of value. Bielinski teaches a method that relies on a single tree of equations to identify the inputs that are related to the actual amount of enterprise cash flow, calculate the cash flow and calculate an enterprise value. Modifying the Bielinski invention to use a predictive model that completes a statistical analysis for all or part of the tree would destroy its ability to perform its intended function by a) producing non linear combinations of data inputs. As discussed previously, the Bielinski model relies on linear, mathematical combinations of inputs. As is well known to those of average skill in the art, neural networks generally produce outputs that are the product of a non-linear combination of inputs and

b) replacing the equations of actual numbers with statistical relationships (see Evidence Appendix, pages 95 - 99).

It should be noted that if the Bielinski tree were not modified to use a predictive model, then it would not be able to replicate any of the functionality of the claimed invention. Because the required modification of Bielinski would destroy its ability to perform its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims

Errors #74) Is a failure to provide any evidence to support assertions that the modifications to Bielinski required to replicate the claimed invention would not destroy its functionality. After additional evidence documenting the fact that the invention described by Bielinski would be destroyed by the modifications required to replicate the claimed functionality, the Examiner changed the assertion regarding the Bielinski document to state that it somehow taught other versions of Value Based Management that would not be destroyed by the required modifications. Evidence that Bielinski teaches an invention that would be destroyed by the required modifications include: a) the Bielinski document which specifically states that the Value Based Management method it teaches relies on SVA principles, b) Shareholder Value Analysis (aka SVA) by Alfred Rappaport which teaches a tree based analysis of cash flow (see related proceedings for acknowledgement of this fact), c) the declaration under Rule 132 provided by Dr. Brous (see Evidence Appendix, pages 100 - 102), d) "What is Value Based Management:" by Thomas Koller, one of the inventors of VBM, e) the declaration under Rule 132 provided by Dr. Rauenzahn (see Evidence Appendix, pages 95 - 99), and f) the Hasendoncks reference.

Because the required modifications of Bielinski would destroy its ability to complete its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims.

Error #75 - It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984).* The function of the Bigus invention is to use objective criteria to select between a plurality of agents or between a plurality of program modules in order to optimize the performance of computer tasks (see Bigus, abstract). By way of contrast, the claimed invention teaches the identification of changes that optimize the financial performance of an organization. Modifying the Bigus invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function and purpose of optimizing the performance of computer tasks. Because the required modification of the Bigus invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made. Affects claim 40.

Error #76 - It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984).* The function of the Lyons invention is to collect, organize, manage and consolidate financial data and provide user defined capabilities for creating financial and corporate reports (see Lyons, Abstract, second sentence). Lyons does this by providing each user with the ability to define all the terms that will be used in his or her reports and the input templates which are used to import data (see Lyons, Column 8, Line 24 through Column 10, Line 25). Using a "common definition" (aka common schema) to integrate data would destroy the ability of the Lyons invention to perform its intended function of enabling each user to define and create financial reports using the definitions they want to use. Because the required modification of the Lyons invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made. Affects claim 44.

Errors 77 through 81 – The claim rejections are based on 35 U.S.C. §103(a) which states: *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title [35 USC 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for claim rejection include:

Error #77) Is a failure to acknowledge the fact that the cited documents fail to teach or suggest the subject matter as whole. As illustrated by the preceding discussion, the obviousness rejections appear to be based of a non-existent standard for obviousness "mentions the same word as another document" instead of "teaches or suggests the subject matter as a whole" as there is no aspect of the rejected claims that is taught or suggested by the cited documents. It is also well established that the *"Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art." In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994).* As detailed under errors 1 through 76, it does not appear that any of the claim limitations were actually considered. Affects all claims.

Error #78) Is a failure to acknowledge the fact that the claim rejections have been authored by an individual(s) who appears to lack the level of skill in the art required to author such rejections. It is well established that the *"hypothetical 'person having ordinary skill in the art' to*

which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art" *Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988)*. It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Baur, Bielinski, Bigus, or Lyons as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously under errors 1 through 77. Affects all claims.

Error #79) Is a failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited documents. This apparent misrepresentation may be a product of the fact that the Examiner does not appear to have the requisite level of skill in the relevant arts (see Error #78). Affects all claims.

Error #80) Is a failure to acknowledge the particular meaning given to the terms "element of value" and "value driver". It is well established that *"words of the claim are generally given their ordinary and customary meaning, unless it appears from the written description that they were used differently by the applicant. See Teleflex Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1325, 63 USPQ2d 1374, 1381 (Fed. Cir. 2002), Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001)* and MPEP § 2111.01. The term "element of value" was given a particular meaning (see lines 8 through 10 on page 19 of the specification) and the term "value driver" was also given a particular meaning in the written description (see page 54, lines 4 through 7 of the specification). Affects all claims.

Error #81) Is a failure to acknowledge the fact that the utility of the claimed invention comprises a surprising result. Market sentiment (as defined in the instant application) is relevant to organization management and value. This is a surprising result because the teachings of all the references provided by the Examiner, namely that markets are always efficient and that security prices are always accurate, have surprisingly been found to be incorrect (see Evidence Appendix, page 109). Affects all claims.

Error 82 – *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that "'[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at I, 82 USPQ2d at 1396).'"* In spite of this well know requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained how the teachings of the different references would be combined to produce anything

useful and/or what would motivate someone of average skill in the art to destroy the functionality of the Bielinksi, Bigus and Lyons inventions and modify the principle of operation of all the references as discussed under errors 66 through 76. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under errors 1 through 65. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has reached a determination of obviousness on the basis of conclusory statements and several hundred errors in the facts and the law. Errors in the law include those identified under errors 77 through 81. <u>Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established.</u>

Errors 83 and 84 – In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #83) Is a failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 82 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the obviousness rejections of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45 and that as a result the rejections fail to meet the substantial evidence standard.

Error #84) Is a failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the obviousness rejection of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 76);

b) there is no rational connection between the statutory requirements for an obviousness rejection, the agency fact findings and the rejection of the claims (see errors 77 through 81),

c) no rational underpinning has been provided to support the legal conclusion of obviousness (see error 82), and

d) prior agency fact-findings have shown that 35 U.S.C. 103 requirements for non-

obviousness are apparently not always considered during the prosecution and allowance of large company patent applications (i.e. 7,395,236). This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of obviousness cannot be properly established.

Error 85 - In accordance with the Patent Act, the U.S. Constitution and other statutes, the U.S.P.T.O. has a responsibility to promote the progress of science and the useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries. The U.S.P.T.O. was given the authority to complete this mission because of its alleged technical expertise in the application of the law. As discussed above, the U.S.P.T.O. does not appear to uniformly or properly apply the law. Furthermore, the relevant U.S.P.T.O. personnel do not appear to have the required levels of technical expertise. As such, the actions taken by the U.S.P.T.O. with respect to this application do not appear to have any statutory basis and are moot. Affects all claims.

Summarizing the preceding discussion, the Examiner has based the claim rejections under this issue on eighty five (85) errors in the facts and the law. When the 85 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 1 is four hundred sixty two (462). The Appellant respectfully submits that because of these errors the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed invention is new, novel and non-obvious.

Issue 2 – Whether claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63 are patentable under 35 USC §103(a) over Bielinski) alone, in view of Baur, in view of Baur and Bigus or in view of Baur and Lyons?

The claims are patentable because the claim rejections are based on several hundred errors in the facts and in the law. Because of these errors, the cited combination of teachings (Bielinski, Baur, Bigus and Lyons) and the arguments related to the cited combination of teachings fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

Errors 1 through 14 – It is well established that: *"in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983))."*

Furthermore, it is well established that: *A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).* Errors in the claim rejections caused by the apparent failure to acknowledge the fact that all the cited references teach away from the invention described in claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63 include error 1, error 2, error 3, error 4, error 5, error 6, error 7, error 8, error 9, error 10, error 11, error 12, error 14 and error 15 identified under Issue 1.

Because the cited documents all exclusively teach methods that teach away from the claimed methods, the prima facie case of obviousness cannot be properly established.

Errors 15 through 37 – It is well established that *"when determining whether a claim is obvious, an examiner must make 'a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.' In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, 'obviousness requires a suggestion of all limitations in a claim.' CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974))* Furthermore, the Board of Patent Appeal and Interferences recently confirmed (In re Wada and Murphy, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make *"a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art." In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added).* In other words, obviousness still requires a suggestion of all the limitations in a claim. Errors in the claim rejections caused by the apparent failure to acknowledge the fact that the cited documents do not teach one or more limitations of the claimed invention include:

Errors #15 through #27) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 55 (affects claims 58, 59, 60, 61, 62, and 63), including:

a) *transforming at least a portion of the data into a causal model of each of one or more categories of an organization value (#15),*

b) *transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that calculate and output a tangible value contribution of each of one or more elements of value to a future market value (#16),*

c) *transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that calculate and output a tangible value contribution of*

each of one or more elements of value to each of the categories of organization value (#17),

d) categories of value are selected from the group consisting of real option, market sentiment and combinations thereof (#19),

e) alliance elements of value (#20),

f) brand elements of value (#21),

g) channel elements of value (#22),

h) employee elements of value (#23),

i) intellectual property elements of value (#24),

j) partnership elements of value (#25),

k) process elements of value (#26), and

l) vendor elements of value (#27).

Error #28) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 58, including: *where a net contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element impacts on other elements of value within said category of value.*

Errors #29 through #34) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 59, including:

a) predictive component of value models, (#29),

b) predictive market value models (#30),

c) relative element strength models, (#31),

d) real option valuation models, (#32),

e) real option discount rate models, (#33),

f) market sentiment models (#34).

Error #35) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 60, including: *where a net contribution for each of one or more elements of value further comprises a direct contribution to a value of a category of value net of any impact on other elements of value.*

Error #36) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 62, including: *where the future market value portion of organization market value further comprises a summation of values selected from the group consisting of the real option value, the portion of current operation value caused by elements of value, the portion of market sentiment value caused by elements of value and combinations*

thereof.

<u>Error #37)</u> Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 63, including: *where the value driver changes that will optimize future market value are identified by algorithms selected from the group consisting of monte carlo algorithms, genetic algorithms, multi criteria optimization algorithms and combinations thereof.*

Errors 38 through 41 - It is well established that when "*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*". Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Bielinksi invention would have to be changed to replicate the functionality of the claimed invention, include error 66, error 67, error 68 and error 69 identified under Issue 1.

Because the required modification of Bielinski would change at least four of its principles of operation, the prima facie case of obviousness cannot be properly made.

Errors 42 through 44 - Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Baur, Bigus and Lyons inventions would have to be changed to replicate the functionality of the claimed invention, include error 70, error 71 and error 72 identified under Issue 1.

Because the required modification of Baur, Bigus and Lyons would change one or more of their principles of operation, the prima facie case of obviousness cannot be properly made.

Errors 45 and 46 - It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984)*. Errors in the claims rejections caused by the failure to acknowledge that the functionality of the Bielinski invention would be destroyed if it was modified to replicate the functionality of the claimed invention, include:

<u>Error #45)</u> The claimed computational model of enterprise market value by element of value and category of value comprises predictive models up to two categories of value, the current operation and/or market sentiment categories of value. Bielinski teaches a method that relies on a single tree of equations to identify the inputs that are related to the actual amount of

enterprise cash flow, calculate the cash flow and calculate an enterprise value. Modifying the Bielinski invention to use a predictive model that completes a statistical analysis for all or part of the tree would destroy its ability to perform its intended function by: a) producing non-linear combinations of data inputs. As discussed previously, the Bielinski model relies on linear, mathematical combinations of inputs. As is well known to those of average skill in the art, neural networks generally produce outputs that are the product of a non-linear combination of inputs and b) replacing the equations of actual numbers with statistical relationships (see Evidence Appendix, pages 95 - 99).

It should be noted that if the Bielinski tree were not modified to use a predictive model, then it would not be able to replicate any of the functionality of the claimed invention. Because the required modification of Bielinski would destroy its ability to perform its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims

Error #46) Is a failure to provide any evidence to support assertions that the modifications to Bielinski required to replicate the claimed invention would not destroy its functionality. After additional evidence documenting the fact that the invention described by Bielinski would be destroyed by the modifications required to replicate the claimed functionality, the Examiner changed the assertion regarding the Bielinski document to state that it somehow taught other versions of Value Based Management that would not be destroyed by the required modifications. Evidence that Bielinski teaches an invention that would be destroyed by the required modifications include: a) the Bielinski document which specifically states that the Value Based Management method it teaches relies on SVA principles, b) Shareholder Value Analysis by Alfred Rappaport which teaches a tree based analysis of cash flow (see related proceedings for acknowledgement of this fact), c) the declaration under Rule 132 provided by Dr. Brous (see Evidence Appendix, pages 100 - 102), d) "What is Value Based Management:" by Thomas Koller, one of the inventors of VBM, e) the declaration under Rule 132 provided by Dr. Rauenzahn (see Evidence Appendix, pages 95 - 99), and f) the Hasendoncks reference.

Because the required modifications of Bielinski would destroy its ability to complete its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims.

Errors 47 through 51 – The claim rejections are based on 35 U.S.C. §103(a) which states: *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title [35 USC 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which*

said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made. Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for claim rejection include:

Error #47) Is a failure to acknowledge the fact that the cited documents fail to teach or suggest the subject matter as whole. As illustrated by the preceding discussion, the obviousness rejections appear to be based of a non-existent standard for obviousness "mentions the same word as another document" instead of "teaches or suggests the subject matter as a whole" as there is no aspect of the rejected claims that is taught or suggested by the cited documents. It is also well established that the *"Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art." In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994).* As detailed under errors 1 through 46, it does not appear that any of the claim limitations were actually considered. Affects all claims.

Error #48) Is a failure to acknowledge the fact that the claim rejections have been authored by an individual(s) who appears to lack the level of skill in the art required to author such rejections. It is well established that the *"hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art" Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988).* It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Baur, Bielinski, Bigus, or Lyons as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously under errors 1 through 47. Affects all claims.

Error #49) Is a failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited documents. This apparent misrepresentation may be a product of the fact that the Examiner does not appear to have the requisite level of skill in the relevant arts (see Errors #48). Affects all claims.

Error #50) Is a failure to acknowledge the particular meaning given to the terms "element of value" and "value driver". It is well established that *"words of the claim are generally given their ordinary and customary meaning, unless it appears from the written description that they were used differently by the applicant. See Teleflex Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1325, 63 USPQ2d 1374, 1381 (Fed. Cir. 2002), Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001), and MPEP § 2111.01.* The term "element of value" was given a particular meaning (see lines 8 through 10 on page 19 of

the specification) and the term "value driver" was also given a particular meaning in the written description (see lines 4 through 7 on page 54 of the specification). Affects all claims.

Error #51) Is a failure to acknowledge the fact that the utility of the claimed invention comprises a surprising result. Market sentiment (as defined in the instant application) is relevant to organization management and value. This is a surprising result because the teachings of all the references provided by the Examiner, namely that markets are always efficient and that security prices are always accurate, have surprisingly been found to be incorrect (see Evidence Appendix, page 109). Affects all claims.

Error 52 – The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that "'[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at I, 82 USPQ2d at 1396).'" In spite of this well know requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained how the teachings of the different documents can be combined to produce anything useful and/or what would motivate someone of average skill in the art to destroy the functionality of the Bielinksi invention and modify the principle of operation of all the references as discussed under errors 38 through 46. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under errors 1 through 37. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has reached a conclusion of obviousness on the basis of conclusory statements supported by several hundred errors in the facts and the law. Errors in the law include those identified under errors 47 through 51. Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established.

Errors 53 and 54 – In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #53) Is a failure to acknowledge the fact that the claim rejections fail under the

substantial evidence standard. Errors 1 through 52 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the obviousness rejections of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63 and that as a result the rejections fail to meet the substantial evidence standard.

Error #54) Is a failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the obviousness rejection of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

  a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 46);

  b) there is no rational connection between the statutory requirements for an obviousness rejection, the agency fact findings and the rejection of the claims (see errors 47 through 51),

  c) no rational underpinning has been provided to support the legal conclusion of obviousness (see error 52), and

  d) prior agency fact-findings have shown that 35 U.S.C. 103 requirements for non-obviousness are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of obviousness cannot be properly established. As noted in error 85 under Issue 1, the actions taken by the U.S.P.T.O. with respect to the instant application do not appear to have any statutory basis and are therefore moot.

Summarizing the preceding discussion, the Examiner has based the claim rejections under this issue on fifty four (54) errors in the facts and the law. When the 54 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 2 is two hundred forty (240). The Appellant respectfully submits that because of these errors the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed invention is new, novel and non-obvious.

Issue 3 – Whether claim 72, claim 73, claim 74, claim 75 and claim 47 are patentable under 35 USC §103(a) over Bielinski) alone, in view of Baur, in view of Baur and Bigus or in view of Baur and Lyons?

The claims are patentable because the claim rejections are based on almost two hundred errors in the facts and in the law. Because of these errors, the cited combination of teachings (Bielinski, Baur, Bigus and Lyons) and the arguments related to the cited combination of teachings fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

Errors 1 through 13 – It is well established that: "in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983))." Furthermore, it is well established that: A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Errors in the claim rejections caused by the apparent failure to acknowledge the fact that all the cited references teach away from the invention described in claim 72, claim 73, claim 74, claim 75 and claim 47 include error 1, error 2, error 3, error 4, error 5, error 6, error 7, error 8, error 9, error 10, error 11, error 14 and error 15 identified under Issue 1. Because the cited documents all exclusively teach methods that teach away from the claimed methods, the prima facie case of obviousness cannot be properly established.

Errors 14 through 27 – It is well established that *"when determining whether a claim is obvious, an examiner must make 'a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.' In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, 'obviousness requires a suggestion of all limitations in a claim.' CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974)) Furthermore, the Board of Patent Appeal and Interferences recently confirmed (In re Wada and Murphy, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make* "*a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.*" *In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added).* In other words, obviousness still requires a suggestion of all the limitations in a claim. Errors in the claim rejections caused by the apparent failure to acknowledge the fact that the cited documents do not teach one or more limitations of the claimed invention include:

Errors #14 through #17) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 72 (affects claims 73, 74 and 75), including:

a) transforming at least a portion of the data into a causal model of each of one or more categories of an organization value (#14),

b) transforming at least a portion of the data into a model of each of one or more categories of an organization value that identify and output a tangible contribution of each of one or more elements of value to the categories of organization value (#15),

c) categories of value are selected from the group consisting of real option, market sentiment and combinations thereof (#16), and

d) using the tangible contribution for each element of value to identify a market value for each element of value (#17).

Errors #18 through #26) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 47 and 75, including: *customers (#18) and elements of value selected from the group consisting of alliances (#19), brands (#20), channels (#21), employees (#22), intellectual property (#23), partnerships (#24), processes (#25) and vendors (#26).*

Error #27) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 74, including: *tracking a change in a value of each of one or more elements of value over time, and including the calculated changes in value of each element of value in an income statement or a cash flow statement.*

Errors 28 through 31 - It is well established that when "*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*". Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Bielinksi invention would have to be changed to replicate the functionality of the claimed invention, include error 66, error 67, error 68 and error 69 identified under Issue 1.

Because the required modification of Bielinski would change at least four of its principles of operation, the prima facie case of obviousness cannot be properly made.

Errors 32 through 34 - Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Baur, Bigus and Lyons inventions would have to be changed to replicate the functionality of the claimed invention, include:

Error #32) One principle of operation Baur relies on is that investor sentiment is a factor that may have an impact on share prices. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that enterprise value

includes a number of categories of value (i.e. real options, market sentiment) and that market sentiment is a category of value with a value that is a function of element of value performance (see Evidence Appendix, pages 91 – 94). Affects all claims.

Error #33) One principle of operation that Bigus relies on is that agents use non causal models to perform computer tasks (see Bigus, abstract). This principle of operation would have to be change to replicate the functionality of the claimed invention that relies on causal models. Another principle of operation that Bigus relies on is the identification and exclusive use of the one best agent or module (see Bigus Column 8, Line 14) from a plurality of agents or modules. This principle of operation would also have to be changed to replicate the functionality of the claimed invention and recognize the fact that a plurality of agents (or bots) for performing the same function in alternate manners are in continual use. Affects all claims.

Error #34) One principle of operation that Lyons relies on is that each user is free to define the terms used in the reports created with the support of the Lyons invention. In particular, Lyons teaches that each user is free to define the terms used in financial reports (see Lyons, Column 8, Lines 64 and 65 and Column 9, Line 13) at any point in the report definition process. By way of contrast, the claimed invention teaches and relies on the use of a single common definition (aka a common schema) for all the aspects of financial performance being analyzed. Changing Lyons to rely on the claimed use of a common schema would be a change in the principle of operation of the Lyon's invention. Affects all claims.

Because the required modification of Baur, Bigus and Lyons would change one or more of their principles of operation, the prima facie case of obviousness cannot be properly made.

Errors 35 and 36 - It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984)*. Errors in the claims rejections caused by the failure to acknowledge that the functionality of the Bielinski invention would be destroyed if it was modified to replicate the functionality of the claimed invention, include:

Error #35) The claimed computational model of enterprise market value by element of value and category of value comprises predictive models up to two categories of value, the current operation and/or market sentiment categories of value. Bielinski teaches a method that relies on a single tree of equations to identify the inputs that are related to the actual amount of enterprise cash flow, calculate the cash flow and calculate an enterprise value. Modifying the

Bielinski invention to use a predictive model that completes a statistical analysis for all or part of the tree would destroy its ability to perform its intended function by: a) producing non linear combinations of data inputs. As discussed previously, the Bielinski model relies on linear, mathematical combinations of inputs. As is well known to those of average skill in the art, neural networks generally produce outputs that are the product of a non-linear combination of inputs and b) replacing the equations of actual numbers with statistical relationships (see Evidence Appendix, pages 95 - 102).

It should be noted that if the Bielinski tree were not modified to use a predictive model, then it would not be able to replicate any of the functionality of the claimed invention. Because the required modification of Bielinski would destroy its ability to perform its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims

Error #36) Is a failure to provide any evidence to support assertions that the modifications to Bielinski required to replicate the claimed invention would not destroy its functionality. After additional evidence documenting the fact that the invention described by Bielinski would be destroyed by the modifications required to replicate the claimed functionality, the Examiner changed the assertion regarding the Bielinski document to state that it somehow taught other versions of Value Based Management that would not be destroyed by the required modifications. Evidence that Bielinski teaches an invention that would be destroyed by the required modifications includes: a) the Bielinski document which specifically states that the Value Based Management method it teaches relies on SVA principles, b) Shareholder Value Analysis by Alfred Rappaport which teaches a tree based analysis of cash flow (see related proceedings for acknowledgement of this fact), c) the declaration under Rule 132 provided by Dr. Brous (see Evidence Appendix, pages 100 - 102), d) "What is Value Based Management:" by Thomas Koller, one of the inventors of VBM, e) the declaration under Rule 132 provided by Dr. Rauenzahn (see Evidence Appendix, pages 95 - 99), and f) the Hasendoncks reference.

Because the required modifications of Bielinski would destroy its ability to complete its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims.

Errors 37 through 41 – The claim rejections are based on 35 U.S.C. §103(a) which states: *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title [35 USC 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would be obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the*

invention was made. Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for claim rejection include:

Error #37) Is a failure to acknowledge the fact that the cited documents fail to teach or suggest the subject matter as whole. As illustrated by the preceding discussion, the obviousness rejections appear to be based of a non-existent standard for obviousness "mentions the same word as another document" instead of "teaches or suggests the subject matter as a whole" as there is no aspect of the rejected claims that is taught or suggested by the cited documents. It is also well established that the *"Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art." In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994).* As detailed under errors 1 through 36, it does not appear that any of the claim limitations were actually considered. Affects all claims.

Error #38) Is a failure to acknowledge the fact that the claim rejections have been authored by an individual(s) who appears to lack the level of skill in the art required to author such rejections. It is well established that the *"hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art" Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988).* It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Baur, Bielinski, Bigus, or Lyons as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously under errors 1 through 37. Affects all claims.

Error #39) Is a failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited documents. This apparent misrepresentation may be a product of the fact that the Examiner does not appear to have the requisite level of skill in the relevant arts (see Error #38). Affects all claims.

Error #40) Is a failure to acknowledge the particular meaning given to the terms "element of value" and "value driver". It is well established that *"words of the claim are generally given their ordinary and customary meaning, unless it appears from the written description that they were used differently by the applicant. See Teleflex Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1325, 63 USPQ2d 1374, 1381 (Fed. Cir. 2002), Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001), and MPEP § 2111.01.* The term "element of value" was given a particular meaning (see lines 8 through 10 on page 19 of the specification) and the term "value driver" was also given a particular meaning in the written

description (see lines 4 through 7 on page 54 of the specification).

Error #41) Is a failure to acknowledge the fact that the utility of the claimed invention comprises a surprising result. Market sentiment (as defined in the instant application) is relevant to organization management and value. This is a surprising result because the teachings of all the references provided by the Examiner, namely that markets are always efficient and that security prices are always accurate, have surprisingly been found to be incorrect (see Evidence Appendix, page 109). Affects all claims.

Error 42 – *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that "'[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at l, 82 USPQ2d at 1396).'"* In spite of this well know requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained how the teachings of the different documents could be combined to produce anything useful and/or what would motivate someone of average skill in the art to destroy the functionality of the Bielinksi invention and modify the principle of operation of all the references as discussed under errors 38 through 36. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under errors 1 through 27. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has reached a conclusion of obviousness on the basis of conclusory statements supported by almost two hundred errors in the facts and the law. Errors in the law include those identified under errors 37 through 41. Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established.

Errors 43 and 44 – In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #43) Is a failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 42 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the obviousness rejections of claim 72,

claim 73, claim 74, claim 75 and claim 47 and that as a result the rejections fail to meet the substantial evidence standard.

Error #44) Is a failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the obviousness rejection of claim 72, claim 73, claim 74, claim 75 and claim 47 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 36);

b) there is no rational connection between the statutory requirements for an obviousness rejection, the agency fact findings and the rejection of the claims (see errors 37 through 41),

c) no rational underpinning has been provided to support the legal conclusion of obviousness (see error 42), and

d) prior agency fact-findings have shown that 35 U.S.C. 103 requirements for non-obviousness are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of obviousness cannot be properly established. As noted in error 85 under Issue 1, the actions taken by the U.S.P.T.O. with respect to the instant application do not appear to have any statutory basis and are therefore moot.

Summarizing the preceding discussion, the Examiner has based the claim rejections under this issue on forty four (44) errors in the facts and the law. When the 44 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 3 is one hundred eighty five (185). The Appellant respectfully submits that because of these errors the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed invention is new, novel and non-obvious.

Issue 4 - Whether claim 49, claim 50, claim 51 and claim 52 are patentable under 35 USC §103(a) over Bielinski in view of Mauboussin or in view of Stork?

The claims are patentable because the claim rejections are based on over a hundred errors in the facts and in the law. Because of these errors, the cited combination of teachings (Bielinski, Mauboussin and Stork) and the arguments related to the cited combination of teachings fail to

establish a prima facie case of obviousness for every rejected claim as detailed below.

Errors 1 through 10 – Errors in the claim rejections caused by the apparent failure to acknowledge the fact that all the cited references teach away from the invention described in claim 49, claim 50, claim 51 and claim 52 include errors 1, 4, 5, 6, 7 and 8 identified under issue #1 and:

Error #7) Is a failure to acknowledge that Bielinski teaches away from the claimed use of predictive causal models of enterprise financial performance. Bielinski teaches a method that calculates the actual amount of enterprise cash flow (see Bielinski, Table 1). By teaching a reliance on actual numbers, Bielinski teaches away from the claimed use of predictive causal models. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 49, claim 50, claim 51 and claim 52.

Error #8) Is a failure to acknowledge that Mauboussin teaches away from the claimed method of valuing real options. The claimed invention teaches valuing real options with a discount rate that comprises a base discount rate plus a risk factor for each element of value that makes a causal contribution to an organization market value. Mauboussin teaches away by teaching that real options should be valued using the risk free interest rate for discounting. By exclusively teaching methods that teach away from the claimed invention, Mauboussin provides additional evidence of the novelty, non-obviousness and newness of claim 49, claim 50, claim 51 and claim 52.

Error #9) Is a failure to acknowledge that Stork teaches away from the claimed method of predictive model development. The claimed invention teaches selecting the best predictive model algorithm from a plurality of different types. Stork teaches away from the claimed method by teaching the exclusive use of neural network models. By exclusively teaching methods that teach away from the claimed invention, Stork provides additional evidence of the novelty, non-obviousness and newness of claim 49, claim 50, claim 51 and claim 52.

Error #10) Is a failure to acknowledge that Stork teaches away from the claimed method of using predictive models for regression analysis. The claimed invention teaches the development and use of causal predictive models for regression analysis. Stork teaches away from the claimed method by teaching the development and use of predictive models for classification. Stork also teaches away by teaching the use of models that are not causal models. By exclusively teaching methods that teach away from the claimed invention, Stork

provides additional evidence of the novelty, non-obviousness and newness of claim 49, claim 50, claim 51 and claim 52.

Errors 11 through 22 – Errors in the claim rejections caused by the apparent failure to acknowledge the fact that the cited documents do not teach one or more limitations of the claimed invention include:

Errors #11 through #13) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 49 (affects claims 50, 51 and 52), including:

a) identifying one or more elements of value that make a causal contribution to an organization market value (#11),

b) computing a difference between a real option value calculated using the company cost of capital as the discount rate and a value calculated using a real option discount rate comprised of a base discount rate plus a risk factor for each element of value that makes a causal contribution to organization market value (#12); and

c) assigning the value difference to the different elements of value based on their relative contribution to a calculated difference in the two discount rates (#13).

Error #14) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 50, including: *identify element of value contributions by learning from the data.*

Error #15) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 51, including: *the discount rate for a real option valuation comprises a base discount rate plus a risk factor for each element of value that makes a causal contribution to an organization market value.*

Errors #16 through #22) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 52, including:

a) identifying one or more value drivers for each element of value (#16),

b) developing one or more element impact summaries from said value drivers for market value and each component of value (#17),

c) identifying a best fit combination of element impact summaries and predictive model algorithm for modeling market value and each component of value (#18),

d) determining a relative strength for each of the elements of value causal to market value change vis a vis competitors (#19),

e) calculating a real option discount rate using the relative element strength information for the elements that support the real option (#20),

f) calculating a real option value and identifying a contribution to real option value by element of value using said real option discount rate (#21), and

g) identifying a net element contribution to enterprise market value by category of value by combining the results from the processing completed in steps a through f (#22).

Errors 23 through 26 - It is well established that when "*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*". Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Bielinksi invention would have to be changed to replicate the functionality of the claimed invention, include error 38, error 39, error 40 and error 41 identified under Issue 2. Because the required modification of Bielinski would change four of its principles of operation, the prima facie case of obviousness cannot be properly made. Affects all claims

Errors 27 and 28 - Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Bielinksi invention would have to be changed to replicate the functionality of the claimed invention, include:

Error #27) One principle of operation Mauboussin relies on is that real options are valued using the risk free rate. By way of contrast, the claimed invention teaches the use of a discount rate that comprises a base discount rate plus a risk factor for each element of value that makes a causal contribution to an organization market value. Because the required modification of Mauboussin would change a principle of operation, the prima facie case of obviousness cannot be properly made. Affects all claims.

Error #28) Two principles of operation associated with Stork: the exclusive reliance on neural network models and the exclusive focus on classification would have to be modified to replicate the functionality of the claimed invention. Because the required modification of Stork would change two of its principles of operation, the prima facie case of obviousness cannot be properly made. Affects all claims.

Errors 29 and 30 - It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984).* Errors in the claims rejections caused by the failure to acknowledge that the functionality of the Bielinski invention would be destroyed if it was modified to replicate the

functionality of the claimed invention, include error 35 and error 36 under Issue 3. Because the required modifications of Bielinski would destroy its ability to complete its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims.

Errors 31 through 34 – The claim rejections are based on 35 U.S.C. §103(a) which states: *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title [35 USC 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for claim rejection include:

Error #31) Is a failure to acknowledge the fact that the cited documents fail to teach or suggest the subject matter as whole. As illustrated by the preceding discussion, the obviousness rejections appear to be based of a non-existent standard for obviousness "mentions the same word as another document" instead of "teaches or suggests the subject matter as a whole" as there is no aspect of the rejected claims that is taught or suggested by the cited documents. It is also well established that the *"Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art." In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994).* As detailed under errors 1 through 30, it does not appear that any of the claim limitations were actually considered. Affects all claims.

Error #32) Is a failure to acknowledge the fact that the claim rejections have been authored by an individual(s) who appears to lack the level of skill in the art required to author such rejections. It is well established that the *"hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art" Ex parte Hyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988).* It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Bielinski, Mauboussin or Stork as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously under errors 1 through 31. Affects all claims.

Error #33) Is a failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited documents. This apparent misrepresentation may be a product of the fact that the Examiner does not appear to have the

requisite level of skill in the relevant arts (see Error #32). Affects all claims.

Error #34) Is a failure to acknowledge the particular meaning given to the terms "element of value" and "value driver". It is well established that *words of the claim are generally given their ordinary and customary meaning, unless it appears from the written description that they were used differently by the applicant. See Teleflex Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1325, 63 USPQ2d 1374, 1381 (Fed. Cir. 2002), Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001), and MPEP § 2111.01.* The term "element of value" was given a particular meaning (see lines 8 through 10 on page 19 of the specification) and the term "value driver" was also given a particular meaning in the written description (see lines 4 through 7 on page 54 of the specification). Affects all claims.

Error 35 – *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that "'[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at l, 82 USPQ2d at 1396)."'* In spite of this well know requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained how the teachings of the different documents could be combined to produce anything useful and/or what would motivate someone of average skill in the art to destroy the functionality of the Bielinksi invention and modify the principle of operation of all the references as discussed under errors 23 through 30. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under errors 1 through 32. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has reached a conclusion of obviousness on the basis of conclusory statements supported by over a hundred errors in the facts and the law. Errors in the law include those identified under errors 31 through 34. Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established.

Errors 36 and 37 – In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #36) Is a failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 35 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the obviousness rejections of claim 49, claim 50, claim 51 and claim 52 and that as a result the rejections fail to meet the substantial evidence standard.

Error #37) Is a failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the obviousness rejection of claim 49, claim 50, claim 51 and claim 52 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 30);

b) there is no rational connection between the statutory requirements for an obviousness rejection, the agency fact findings and the rejection of the claims (see errors 31 through 34),

c) no rational underpinning has been provided to support the legal conclusion of obviousness (see error 35), and

d) prior agency fact-findings have shown that 35 U.S.C. 103 requirements for non-obviousness are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of obviousness cannot be properly established. As noted in error 85 under Issue 1, the actions taken by the U.S.P.T.O. with respect to the instant application do not appear to have any statutory basis and are therefore moot.

Summarizing the preceding discussion, the Examiner has based the claim rejections under this issue on thirty seven (37) errors in the facts and the law. When the 37 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 4 is one hundred twenty one (121). The Appellant respectfully submits that because of these errors the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed invention is new, novel and non-obvious.

Issue 5 – Whether claim 64, claim 65, claim 67, claim 68 and claim 69 are patentable under 35 USC §103(a) over Davis in view of Bielinski, in view of Srivastava or in view of Cleland?

The claims are patentable because the claim rejections are based on several hundred errors in the facts and in the law. Because of these errors, the cited combination of teachings (Bielinski, Cleland, Davis and Srivastava) and the arguments related to the cited combination of teachings fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

Errors 1 through 10 –Errors in the claim rejections caused by the apparent failure to acknowledge the fact that all the cited references teach away from the invention described in claim 64, claim 65, claim 67, claim 68 and claim 69 include:

Error #1) Is a failure to acknowledge that Bielinski teaches away from the claimed use of predictive models. Bielinski teaches away from every aspect of the claimed invention. Bielinski teaches a method that calculates the actual amount of enterprise cash flow (see Bielinski, Table 1). By teaching a reliance on actual numbers, Bielinski teaches away from the claimed use of predictive models. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68 and claim 69.

Error #2) Is a failure to acknowledge that Davis teaches away from the claimed use of a common schema. Davis teaches away from every aspect of the claimed invention. In particular, Davis teaches away from the claimed integration using a common schema by teaching that data from disparate systems is matched where possible and that data that cannot be matched are simply appended to a dictionary (see Davis, Column 15, line 15 through line 47). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68 and claim 69.

Error #3) Is a failure to acknowledge that Davis teaches away from the claimed method of aggregating data. Davis teaches away from every aspect of the claimed invention. In particular, the claimed invention teaches the aggregation of data in accordance with a common model or schema. By way of contrast, Davis teaches the storage of data by line and/or document in accordance with a common dtd (see Davis, Column 21, line 58 and FIG. 13). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68 and claim 69.

Error #4) Is a failure to acknowledge that Srivastava teaches away from the claimed method of aggregating data. Srivastava teaches away from every aspect of the claimed invention. In

particular, the claimed invention teaches the aggregation of data in accordance with a common model or schema. Srivastava teaches away by teaching the creation of a database that is used to store and manage metadata (i.e. a unified metadata repository, see Srivastava abstract). By exclusively teaching methods that teach away from the claimed invention, Srivastava provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68 and claim 69.

Error #5) Is a failure to acknowledge that Srivastava teaches away from the claimed use of a common schema. Srivastava teaches away from every aspect of the claimed invention. The claimed invention teaches the transformation of data into an integrated database that uses a common schema. Srivastava teaches away by teaching the ad hoc creation of metadata summaries from the media file data without requiring the use of common definitions (aka common schema) for the metadata being stored in the unified metadata repositories (see Srivastava, abstract). By exclusively teaching methods that teach away from the claimed invention, Srivastava provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68 and claim 69.

Error #6) Is a failure to acknowledge that Davis teaches away from the claimed method of predictive model development. The claimed invention teaches using independent components of application software to acquire data that has already been integrated using xml and a common schema and transform the data into a predictive model. Davis teaches away by teaching the use of a viewer (100) that relies on a tree view defined by a common data type definition (dtd) to transform, format, manipulate and display data that has been pre-specified by line into a small amount of RDML data. By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68 and claim 69.

Error #7) Is a failure to acknowledge that Cleland teaches away from the claimed use of predictive models. The claimed invention teaches using predictive models to objectively analyze the impact of elements of value such as customers on financial performance. Cleland teaches away from the claimed method by teaching a reliance on subjective impressions regarding quality and comparability for measuring the value of enterprise offerings to customers. By exclusively teaching methods that teach away from the claimed invention, Cleland provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68 and claim 69.

Error #8) Is a failure to acknowledge that Cleland teaches away from the claimed method of

analysis. The claimed invention teaches the development of predictive models that can be used to support the analysis and measurement of the value of customers and a plurality of other elements of value to an organization. Cleland teaches the analysis and measurement of organization offerings to customers. By exclusively teaching methods that teach away from the claimed invention, Cleland provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68 and claim 69.

Error #9) Is a failure to acknowledge that Lyons teaches away from the claimed use of a common schema. The claimed invention teaches efficiently storing data in accordance with xml and a common schema. Lyons describes an invention that allows each user to define and produce financial reports. In particular, each user is free to define the terms used in the financial reports (see Lyons, Column 8, Lines 64 and 65 and Column 9, Line 13) at any point in the report definition process. By way of contrast, the claimed invention teaches and relies on the use of a single common definition (aka a common schema) for all the aspects of financial performance being analyzed. By exclusively teaching methods that teach away from the claimed invention, Lyons provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68 and claim 69.

Error #10) Is a failure to acknowledge that Bielinski teaches away from the claimed analysis of real options. Bielinski teaches and relies on the VBM method of discounted cash flow modeling. VBM uses Shareholder Value Analysis (hereinafter, SVA) principles, including a tree based model of cash flow, but advances the technique by using historical data, operations linked value drivers and concurrent changes in multiple value drivers. In accordance with the VBM/SVA method, most of the tree is used for calculating the actual cash flow for prior periods. The remainder of the tree is used for determining the cost of capital used to discount the cash flow. Putting the two parts of the tree together, the VBM method teaches that the only way to increase enterprise value is to increase the value of period cash flow (see Evidence Appendix, pages 100 - 102). By way of contrast, the claimed invention teaches that as many as three categories of value determine the value of an enterprise as shown in the table below. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 68.

Categories of value per 09/764,068	Categories of value per Bielinski
1. Current operation (cash flow), 2. Market sentiment, and 3. Real options.	1. Cash flow (current operation)

Errors 11 through 64 – Errors in the claim rejections caused by the apparent failure to

acknowledge the fact that the cited documents do not teach one or more limitations of the claimed invention include:

Errors #11 and #12) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 64 (affects claims 65, 67, 68 and 69), including:

a) using two or more independent components of application software to produce one or more useful results by transforming data representative of a physical object or substance into a predictive model that has a utility in managing or monitoring a real world activity of said object or substance (#11), and

b) where said data has been aggregated from two or more systems in accordance with a common model or schema defined by an xml metadata standard (#12).

Error #13) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 65, including: *independent components of application software can be flexibly combined as required to support the development of one or more useful results.*

Errors #14 through #34) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 67, including: *independent components of application software that complete processing selected from the group consisting of: analysis (#14), attribute derivation (#15), capitalization (#16), causal analysis (#17), classification (#18), clustering (#19), count linkages (#20), data acquisition (#21), data conversion (#22), data storage (#23), data transformation (#24), element life estimation (#25), indicator selection (#26), induction (#27), keyword counting (#28), keyword match identification (#29), locate linkages (#30), relative strength determination (#31), statistical learning (#32), valuation (#33) and vector generation (#34).*

Errors #35 through #46) Is a failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 68, including: *a method that produces useful results selected from the group consisting of: element contribution determination (#35), element impact quantification (#36), element valuation (#37), enterprise financial performance optimization (#38), enterprise financial performance simulation (#39), future market value optimization (#40), future market value quantification (#41), management reporting (#42), real option discount rate calculation (#43), real option valuation (#44), share price valuation (#45), and sub-element clustering (#46).*

Errors #47 through #56) Is a failure to acknowledge the fact that the cited documents do not

teach or suggest one or more limitations of claim 69, including: *systems selected from the group consisting of alliance management systems (#47), brand management systems (#48), customer relationship management systems (#49), channel management systems (#50), estimating systems (#51), intellectual property management systems (#52), process management systems (#53), supply chain management systems (#54), vendor management systems (#55), external databases (#56).*

Errors 57 through 59 - Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Bielinksi invention would have to be changed to replicate the functionality of the claimed invention, include:

Error #57) One principle of operation that Bielinski relies on is the use of the actual prior period cash flow to calculate an enterprise value (see Evidence Appendix, pages 95 - 102). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions rely on predictive models where the primary outputs are between one and zero. Changing to statistical models for identifying relative contributions and separate models for calculating segment valuations would be a change in a principle of operation of the Bielinski invention. Affects claims 64, 65, 67, 68 and 69.

Error #58)   A second principle of operation that Bielinski teaches and relies on is that analyses of cash flow only require consideration of the factors that have a direct, linear relationship on an output value. By way of contrast, the claimed invention teaches and relies on the fact that inputs may have an indirect and/or non linear impact an output value. This principle of operation would have to be changed to add a consideration of the factors that have an indirect and/or non-linear relationship to output values to the analysis method taught by Bielinski. Affects claims 64, 65, 67, 68 and 69.

Error #59) A third principle of operation Bielinski relies on is the standard model which teaches that cash flow is the sole determinant of enterprise value. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that enterprise value includes a number of categories of value (i.e. real options, market sentiment) that are not included in the standard model (see Evidence Appendix, pages 95 - 102). Affects claim 68.

Errors 60 through 65 - Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Cleland, Davis and Srivastava references would have to be changed to replicate the functionality of the claimed invention, include:

Error #60) One principle of operation that Davis teaches and relies on is that source data and conversion information are combined in a viewer or formatter to produce small amounts of data with a common dtd on demand. By way of contrast, the claimed invention teaches and relies on the conversion and aggregation of source data that it is made accessible for use by independent components of application software. Davis would have to be modified to replicate the claimed functionality. Because the required modification of Davis would change one of its principles of operation, the prima facie case of obviousness cannot be properly made. Affects all claims.

Error #61) Another principle of operation that Davis teaches and relies on is data field mapping" to map from source databases to an RDML document defined by a dtd. By way of contrast, the claimed invention teaches and relies on "metadata mapping" to map from source database metadata to integrated database metadata. Davis would have to be modified to replicate the claimed functionality. Because the required modification of Davis would change one of its principles of operation, the prima facie case of obviousness cannot be properly made. Affects all claims.

Error #62)   A third principle of operation that Davis teaches and relies on is the storage of data by line in accordance with a dtd (see Davis, Column 21, line 58). By way of contrast, the claimed invention aggregating data in accordance with a common schema. Davis would have to be modified to replicate the claimed functionality. Because the required modification of Davis would change one of its principles of operation, the prima facie case of obviousness cannot be properly made. Affects all claims.

Error #63) One principle of operation that Srivastava teaches and relies on is the use of "document element mapping" to map elements from xml documents to a database schema. By way of contrast, the claimed invention teaches and relies on "metadata mapping" to map from source database metadata to integrated database metadata. Srivastava would have to be modified to replicate the claimed functionality. Because the required modification of Srivastava would change one of its principles of operation, the prima facie case of obviousness cannot be properly made. Affects all claims.

Error #64)   Another principle of operation that Srivastava teaches and relies on is analyzing source data to develop a summary of the contents before storing the summary in a database along with the source data. By way of contrast, the claimed invention teaches and relies on the aggregation of source data in accordance with a common schema without a summary. Srivastava would have to be modified to replicate the claimed functionality.   Because the

required modification of Srivastava would change one of its principles of operation, the prima facie case of obviousness cannot be properly made. Affects all claims.

Error #65) One principle of operation that Cleland teaches and relies on is the use of two axis tables in a report. By way of contrast, the claimed invention teaches and relies on the use of tables to store data. Cleland would have to be modified to replicate the claimed functionality. Because the required modification of Cleland would change one of its principles of operation, the prima facie case of obviousness cannot be properly made. Affects claim 72.

Because the required modifications of Cleland, Davis and Srivastava would change their principles of operation, the prima facie case of obviousness cannot be properly made.

Errors 66 through 68 – It is well established that when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984). Errors in the claims rejections caused by the failure to acknowledge that the functionality of the Bielinski and Davis inventions would be destroyed if they were modified to replicate the functionality of the claimed invention, include:

Error #66) Is a failure to acknowledge that Bielinski would be destroyed by the required modification. The claimed invention relies on predictive models to analyze data. By way of contrast, Bielinski teaches a method that relies on the actual amount of enterprise cash flow, calculate the cash flow and calculate an enterprise value. Modifying the Bielinski invention to use a predictive model that completes a statistical analysis for all or part of the tree would destroy its ability to perform its intended function (see Evidence Appendix, pages 95 - 99). Affects claims 64, 65, 67, 68 and 69.

Errors #67) Is a failure to provide any evidence to support assertions that the modifications to Bielinski required to replicate the claimed invention would not destroy its functionality. After additional evidence documenting the fact that the invention described by Bielinski would be destroyed by the modifications required to replicate the claimed functionality, the Examiner changed the assertion regarding the Bielinski document to state that it somehow taught other versions of Value Based Management that would not be destroyed by the required modifications. Evidence that Bielinski teaches an invention that would be destroyed by the required modifications includes: a) the Bielinski document which specifically states that the Value Based Management method it teaches relies on SVA principles, b) Shareholder Value Analysis by Alfred Rappaport which teaches a tree based analysis of cash flow (see related proceedings for

acknowledgement of this fact), c) the declaration under Rule 132 provided by Dr. Brous (see Evidence Appendix, pages 100 - 102), d) "What is Value Based Management:" by Thomas Koller, one of the inventors of VBM, e) the declaration under Rule 132 provided by Dr. Rauenzahn (see Evidence Appendix, pages 95 - 99), and f) the Hasendoncks reference.

Because the required modifications of Bielinski would destroy its ability to complete its intended function, the prima facie case of obviousness cannot be properly made. Affects claims 64, 65, 67, 68 and 69.

Error #68) The function of the Davis invention is to use common dtd to organize, manipulate and present data in a graph or table by line (Davis, Column 21, Line 58). In accordance with the Davis invention, the data that will analyzed and/or presented in a graph or table must be known before the data from different sources can be combined to produce a graph or table. By way of contrast, the system of the present invention stores data in accordance with a common schema and outputs the database (aka makes it available for use). The determination as to which data are to be presented in a graph or table is made only after completing one or more analyses of the integrated data. Modifying the Davis invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function and purpose as all possible data would be required to be placed in a graph. Because the required modification of the Davis invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made. Affects all claims.

Errors 69 through 71 – The claim rejections are based on 35 U.S.C. §103(a) which states: *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title [35 USC 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for claim rejection include:

Error #69) Is a failure to acknowledge the fact that the cited documents fail to teach or suggest the subject matter as whole. As illustrated by the preceding discussion of errors 1 through 68, the obviousness rejections appear to be based of a non-existent standard for obviousness "mentions the same word as another document" instead of "teaches or suggests the subject matter as a whole" as there is no aspect of the rejected claims that is taught or suggested by

the cited documents. It is also well established that the *"Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art." In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994).* As detailed under errors 1 through 68, it does not appear that any of the claim limitations were actually considered. Affects all claims.

Error #70) Is a failure to acknowledge the fact that the claim rejections have been authored by an individual(s) who appears to lack the level of skill in the art required to author such rejections. It is well established that the *"hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art" Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988).* It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Bielinski, Cleland, Davis or Srivastava as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously under errors 1 through 69. Affects all claims.

Error #71) Is a failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited documents. This apparent misrepresentation may be a product of the fact that the Examiner does not appear to have the requisite level of skill in the relevant arts (see Error #70). Affects all claims.

Error 72 – *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that "'[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at I, 82 USPQ2d at 1396)."'* In spite of this well know requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained how the teachings of the cited documents would be combined to produce anything useful and/or what would motivate someone of average skill in the art to destroy the functionality of the Bielinksi and Davis inventions and modify the principle of operation of all the references as discussed under errors 57 through 68. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under errors 1 through 56. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has reached a conclusion of obviousness on the basis of over two hundred errors in the facts and the law. Errors in the law include those identified under errors 69 through 71. Because no rational

underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established.

Errors 73 and 74 – In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #73) Is a failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 72 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the obviousness rejections of claim 64, claim 65, claim 67, claim 68 and claim 69 and that as a result the rejections fail to meet the substantial evidence standard.

Error #74) Is a failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the obviousness rejection of claim 64, claim 65, claim 67, claim 68 and claim 69 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 76);

b) there is no rational connection between the statutory requirements for an obviousness rejection, the agency fact findings and the rejection of the claims (see errors 77 through 79),

c) no rational underpinning has been provided to support the legal conclusion of obviousness (see error 80), and

d) prior agency fact-findings have shown that 35 U.S.C. 103 requirements for non-obviousness are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of obviousness cannot be properly established. As noted in error 85 under Issue 1, the actions taken by the U.S.P.T.O. with respect to the instant application do not appear to have any statutory basis and are therefore moot.

Summarizing the preceding discussion, the Examiner has based the claim rejections under this

issue on seventy four (74) errors in the facts and the law. When the 74 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 5 is one hundred eighty two (182). The Appellant respectfully submits that because of these errors the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed invention is new, novel and non-obvious.

Issue 6 - Whether claim 46, claim 48, claim 53 and claim 54 are anticipated under 35 USC §102(b) by Bielinski?

The claims are patentable because the claim rejections are based on several hundred errors in the facts and in the law. Because of these errors, the cited document (Bielinski) and the arguments related to the cited document fail to establish a prima facie case of anticipation for every rejected claim as detailed below.

Errors 1 through 7 - It is well established that: *"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).* Errors in the claim rejections caused by the apparent failure of the cited document to expressly or inherently describe elements of a claim include:

Error #1) Is a failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to prepare data representative of an organization for use in processing.* The Bielinski document does not mention programs or program storage devices of any kind. The arithmetic described by Bielinski is apparently completed by a computer but this does not teach or imply that a program should instruct a computer to prepare the data required for completing the arithmetic described by Bielinski. Affects all claims.

Error #2) Is a failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to transform at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a current operation.* The Bielinski document does not mention programs or program storage devices of any kind. The arithmetic described by Bielinski is apparently completed by

a computer but this does not teach or imply that a program should instruct a computer develop a causal model. Bielinski does not expressly or inherently describe:

a) that data are transformed into a causal model,

b) the identification or analysis of "elements of value" as the term is specifically defined in the written description,

c) the development a causal model, and/or

d) the development of a model that identifies and/or outputs a tangible value contribution of each of one or more elements of value to a current operation value.

Affects all claims.

Error #3) Is a failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to transform at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a real option category of value* – The Bielinski document does not mention programs or program storage devices of any kind. Bielinski does not expressly or inherently describe that data are transformed into a causal model. Bielinski does not expressly or inherently teach the identification or analysis of "elements of value" as the term is defined in the written description. Bielinski does not expressly or inherently teach that a causal model identifies and/or outputs a tangible value contribution of each of one or more elements of value to a real option category of value. Furthermore, completing the arithmetic described by Bielinski does not expressly or inherently suggest: real options need to be evaluated. Affects all claims.

Error #4) Is a failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer that reports the value contribution of the elements of value using an electronic display or a paper document.* The Bielinski document does not mention programs or program storage devices of any kind. The arithmetic described by Bielinski is apparently completed by a computer but this does not teach or imply that a program should instruct a computer to provide reports. Bielinski does not expressly or inherently teach the identification or analysis of "elements of value" as the term is defined in the written description. Bielinski does not expressly or inherently describe reporting value contributions from any elements of value - it only provides an enterprise valuation (also, see Error #2, items b) and d) above). Affects all claims

Error #5) Is a failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 48, namely: *where a tangible value contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element of value impacts on other elements of value.* Bielinski does not expressly or inherently teach:

a) the identification or analysis of "elements of value" as the term is specifically defined in the written description,

b) more than one category of value (i.e. real options, market sentiment, etc.),

c) the development of a model that identifies and/or outputs a tangible contribution of each of one or more elements of value to a current operation, and/or

d) the identification of element of value impacts on other elements of value.

Affects all claims.

Error #6) Is a failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 53, namely: *where the calculated value for each element of value further comprises a value for a point in time within a sequential series of points in time* – Bielinski does not expressly or inherently teach the identification or analysis of "elements of value" as the term is defined in the written description. Furthermore, Bielinski does not teach or suggest calculating a value for any elements of value for any points in time. The only thing the Bielinski invention teaches is the valuation of enterprise cash flow using historical data.

Error #7) Is a failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 54, namely: *where the net relative contribution for each element of value to each category of value further comprises a net causal contribution* – see the discussion for errors 1 through 6 above.

Errors 8 through 15 - It is well established that: *"The identical invention must be shown in as complete detail as is contained in the .. claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).* Errors in the claim rejections caused by the apparent failure of the cited document to include the same level of detail found in the claim include:

Error #8) Is a failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to prepare data representative of an organization for use in processing.* Affects all claims.

Error #9) Is a failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to transform at least a portion of the data into a causal model of each of one or more categories of an organization value.* Affects all claims.

Error #10) Is a failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to transform at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a real option category of value.* Affects all claims.

Error #11) Is a failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to transform at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a current operation category of value.* Affects all claims.

Error #12) Is a failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer that reports the value contribution of the elements of value using an electronic display or a paper document.* Affects all claims

Error #13) Is a failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 48, namely: *where a tangible value contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element of value impacts on other elements of value.*

Error #14) Is a failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 53, namely: *where the calculated value for each element of value further comprises a value for a point in time within a sequential series of points in time.*

Error #15) Is a failure to acknowledge the fact that Bielinski does not use the same level of

detail to describe an element of Claim 54, namely: *where the net relative contribution for each element of value to each category of value further comprises a net causal contribution.*

Errors 16 through 19 It is well established that that: *"in relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).* In spite of this well known requirement, no explanation was provided regarding the inherency of the limitations of claim 46 (#16), claim 48 (#17), claim 53 (#18) and claim 54 (#19).

Errors 20 through 47 It is well established that that: *"in order to anticipate a claimed invention, a prior art reference must enable one of ordinary skill in the art to make the invention without undue experimentation. Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1336 (Fed. Cir. 2008) (citing In re Omeprazole Patent Litig., 483 F.3d 1364, 1379 (Fed. Cir. 2007)).* It is well known to those of average skill in the art that unlearning "known" methods is often the most difficult part of learning for people of all ages (see Evidence Appendix, page 90 for confirmation). Extensive and undue experimentation would be required to reveal the fact that the listed Bielinski methods have serious shortcomings and should be unlearned (or forgotten). Furthermore, replicating the functionality of the claimed invention would also require the addition of a number of new capabilities not described by Bielinski. Extensive and undue experimentation would be required to support all three steps. Errors in the rejection of claim 46, claim 48, claim 53 and claim 54 caused by the apparent failure to acknowledge the need for extensive experimentation include:

Error #20) Is a failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive reliance on actual numbers to complete analyses taught by Bielinski. Affects all claims.

Error #21) Is a failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive reliance of cash flow to calculate enterprise value taught by Bielinski. Affects all claims.

Error #22) Is a failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive focus on factors that can be used to calculate actual cash flow that is taught by Bielinski. Affects all claims.

Error #23) Is a failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive use of linear models taught by Bielinski.

Error #24) Is a failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive use of activities, counts, expenditures and

summary financial measures for model inputs. Affects all claims.

Error #25) Is a failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive focus on historical financial data. Affects all claims.

Error #26) Is a failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive reliance on the efficient market hypothesis. Affects all claims.

Errors #27 through #47) Is a failure to acknowledge the fact that extensive and undue experimentation would be required to develop at least 20 new capabilities used in the claimed invention that are not inherently or explicitly described by Bielinski. Affects all claims.

The required experimentation would clearly be excessive and undue because the references disclosed to date do not support the development of any of the methods outlined above (i.e. errors 20 through 47).

Error 48   It is well established that: *the reference must not only disclose all elements of the claim within the four corners of the document, but it must also disclose those elements "arranged as in the claim" (Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548 (Fed. Cir. 1983)).* Missing elements were discussed under errors 1 through 19. Bielinski also fails to arrange elements as they are arranged in the claim. In particular, Bielinski uses a single spreadsheet to analyze an enterprise (see Bielinski Table 1). By way of contrast, the claimed invention relies on a separate analysis of each of the categories of value. Affects all claims.

Errors 49 through 53   The claim rejections are based on 35 U.S.C. §102(b) which states: *A person shall be entitled to a patent unless the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.* Errors in the rejection of claim 46, claim 48, claim 53 and claim 54 caused by the apparent failure to meet any of the statutory requirements for anticipation rejections include:

Error #49) Is a failure to acknowledge the fact that the cited document fails to describe any elements of the claimed invention. As detailed in the preceding discussion, the anticipation rejections appear to be based of a non-existent standard for anticipation "mentions some the same words as another document" instead of "describes the invention" as there is not one aspect of the rejected claims that was included in the cited document.   It is also well established that the *"Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art." In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994).* As detailed under errors 1 through 48, the Examiner does not appear

to have considered any of the limitations. Affects all claims.

Error #50)   Is a failure to acknowledge that those signing the relevant Office Actions apparently do not understand the relevant scientific and engineering principles. It is unlikely that anyone who understood the relevant scientific and engineering principles would attempt to reject the pending claims on the basis of the Bielinski reference. Affects all claims.

Error #51) Is a failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited document. For example, the Examiner has stated that the Bielinski anticipates the development of a model of element of value impact on the current operation and real option categories of value. This is simply not true. Many other examples could be provided. Affects all claims.

Error #52)   Is a failure to acknowledge the particular meaning given to the term "element of value".   It is well established that *words of the claim are generally given their ordinary and customary meaning, unless it appears from the written description that they were used differently by the applicant. See Teleflex Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1325, 63 USPQ2d 1374, 1381 (Fed. Cir. 2002), Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001), and MPEP § 2111.01*.   The term "element of value" was given a particular meaning (see lines 8 through 10 on page 19 of the specification). Affects all claims.

Error #53)   Is a failure to acknowledge the fact that the utility of the claimed invention comprises a surprising result. Market sentiment (as defined in the instant application) is relevant to organization management and value.   This is a surprising result because the teachings of all the references provided by the Examiner, namely that markets are always efficient and that security prices are always accurate, have surprisingly been found to be incorrect (see Evidence Appendix, page 109). Affects all claims.

Errors 54 and 55 – In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #54)   Is a failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 53 clearly show that the relevant Office Action

fails to provide even a scintilla of evidence to support the anticipation rejections of claim 46, claim 48, claim 53 and claim 54 and that as a result the rejections fail to meet the substantial evidence standard.

Error #55) Is a failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the anticipation rejection of claim 46, claim 48, claim 53 and claim 54 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty and newness of the rejected claims (see errors 1 through 48);

b) there is no rational connection between the agency fact findings and the statutory requirements for an anticipation rejection (see errors 49 through 53), and

c) prior agency fact-findings have shown that 35 U.S.C. 102 and/or 35 U.S.C. 103 requirements for novelty are apparently not always applied during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of anticipation cannot be properly established. As noted in error 85 under Issue 1, the actions taken by the U.S.P.T.O. with respect to the instant application do not appear to have any statutory basis and are therefore moot.

Summarizing the preceding discussion, the Examiner has based the claim rejections under this issue on fifty five (55) errors in the facts and the law. When the 55 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 6 is one hundred ninety (190). The Appellant respectfully submits that because of these errors the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of anticipation for a single claim. These failures provide additional evidence that the claimed invention is new and novel.

Issue 7 - Whether the invention described in claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 72, claim 73 and claim 74 represents statutory subject matter under USC §101?

The claims are patentable because the claim rejections are based on several hundred errors in the facts and in the law. Because of these errors the relevant Office Action failed to establish a prima facie case of non statutory subject matter for every rejected claim as detailed below.

Errors 1 through 3 – It is well established "*the burden is on the USPTO to set forth a prima facie case of unpatentability. Therefore if USPTO personnel determine that it is more likely than not that the claimed subject matter falls outside all of the statutory categories, they must provide an explanation.*(See, e.g., In re Nuitjen, Docket no. 2006-1371 (Fed. Cir. Sept. 20, 2007)(slip. op. at 18))*. Errors in the claim rejections caused by a failure to provide an explanation include:

Error #1) Is a failure to explain how the claimed inventions can be completed using mental processes. In particular, a valid claim rejection would explain how an individual can complete the claimed analyses using only mental processes. Affects all claims.

Error #2) Is a failure to explain why the claims are rejected as being non statutory after considering the fact that the Supreme Court has specifically stated "*[a] process may be patentable irrespective of the particular form of the instrumentalities used*" (Cochrane v. Deener, 94 U. S. 780). Affects all claims.

Error #3) Is a failure to explain why the claims are considered to be non statutory when the Supreme Court and the CAFC (Bilski) have both found the transformation of data regarding real world activities and/or objects into a different state or thing to be statutory subject matter. Affects all claims.

In short, the complete absence of a logical explanation leads to the inevitable conclusion that the Examiner has failed to establish a prima facie case that would support a §101 rejection for a single claim.

Error 4 – Is a failure to acknowledge that the conclusory statement that is the sole basis for the claim rejections is demonstrably false. It is well known to those of average skill in the art that human beings cannot reliably process more than four variables at a time (see Evidence Appendix, pages 107 – 108 for confirmation). Those of average skill in the art will also recognize that claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 72, claim 73 and claim 74 all involve the use of models that require the simultaneous manipulation of numbers of variables that are several orders of magnitude greater than the four variables a human can process with an acceptable degree of accuracy. Putting these facts together it is clear that the stated basis for the claim rejection is demonstrably false and that the claimed inventions cannot be completed solely by the use of mental processes. Furthermore, the stated basis for these claim rejections adds to the substantial evidence that those authoring and/or approving the §101 rejections do not appear to

have the capability of understanding the scientific and engineering principles applicable to the pertinent art. Affects all claims.

Errors 5 and 6 –As noted in the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility *"the Supreme Court noted that one example of a statutory "process" is where the process steps provide a transformation or reduction of an article to a different state or thing (Diehr, 450 U.S. at 183, 209 USPQ at 6)*. In Alappat, the Court held that *"data, transformed by a machine" "to produce a smooth waveform display" "constituted a practical application of an abstract idea." State Street, 149 F.3d at 1373*. In Arrhythmia, the Court held *"the transformation of electrocardiograph signals" "by a machine" "constituted a practical application of an abstract idea." Id*. Likewise, in State Street, the Court held that *"the transformation of data" "by a machine" "into a final share price, constitutes a practical application of a mathematical algorithm." Id*. Thus, while Diehr involved the transformation of a tangible object - curing synthetic rubber - the Court also regards the transformation of intangible subject matter to similarly be eligible, so long as data represent some real world activity. In re Bilski, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (2008) generally follows these prior decisions and states that the data transformed by a process must represent an object or substance that physically exists. Errors in the claim rejections caused by a failure to recognize that the claimed inventions meet the requirements for statutory subject matter include:

Error #5) Is a failure to acknowledge that claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69 describe processes for transforming data representative of things that physically exist (i.e. a business, customers, vendors, etc.) into a different state or thing: a model of enterprise financial performance. As such they represent statutory subject matter. The model has utility in completing forecasts, analyzing business performance and simulating the impact of changes to the business. As discussed in detail in the summary of claimed subject matter, the transformation of data into a model comes after data representative of the business has been transformed into an integrated database.

Error #6) Is a failure to acknowledge that claim 72, claim 73 and claim 74 describe a machine for transforming data representative of things that physically exist (i.e. a business, customers, vendors, etc.) into a different state or thing: a model of enterprise financial performance. As such the claims represent statutory subject matter. The model has utility in completing forecasts, analyzing business performance and simulating the impact of

changes to the business. As discussed in detail in the summary of claimed subject matter, the transformation of data into a model comes after data representative of the business has been transformed into an integrated database.

Errors 7 and 8 – In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of USPTO findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #7) Is a failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 6 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the non statutory subject matter rejection of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 72, claim 73 and claim 74 and that as a result the rejections fail to meet the substantial evidence standard.

Error #8) Is a failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the non statutory subject matter rejection of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 72, claim 73 and claim 74 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

a) no evidence has been provided to support the legal conclusion of non statutory subject matter (see errors 1 through 4),

b) there is no rational connection between the statutory requirements for non statutory subject matter rejections and the agency fact findings (see errors 5 and 6), and

c) prior agency fact-findings have shown that 35 U.S.C. 101 requirements for statutory subject matter are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of non statutory subject matter can not be properly established. As noted in error 85 under Issue 1, the

actions taken by the U.S.P.T.O. with respect to the instant application do not appear to have any statutory basis and are therefore moot.

As detailed above, the Examiner has based the claim rejections under this issue on eight (8) errors in the facts and the law. When the 8 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 7 is one hundred eighty eight (188). Because of these errors, the claim rejections do not meet either standard of the APA and the prima facie case of non-statutory subject matter cannot be properly established. The Appellant respectfully submits that the preceding discussion makes it clear that the claimed process inventions pass the two prong test and that the claims describe inventions that support a number of practical applications with substantial, specific utilities and that they therefore represent statutory subject matter.

Issue 8 – Whether the invention described in claim 64, claim 65, claim 67, claim 68 and claim 69 are enabled under 35 USC 112, first paragraph?
The claims are patentable because the claim rejections are based on almost a hundred errors in the facts and in the law. Because of these errors, the arguments presented by the Examiner fail to establish a prima facie case of a lack of enablement for every rejected claim as detailed below.

Errors 1 through 4 – It is well established that *"A description as filed is presumed to be adequate; unless or until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption. See, e.g., In re Marzocchi, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). The examiner, therefore, must have a reasonable basis to challenge the adequacy of the written description. The examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. Wertheim, 541 F.2d at 263, 191 USPQ at 97. In rejecting a claim, the examiner must set forth express findings of fact regarding the above analysis which support the lack of written description conclusion. These findings should: (A) Identify the claim limitation at issue; and (B) Establish a prima facie case by providing reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed. A general allegation of "unpredictability in the art" is not a sufficient reason to support a rejection for lack of adequate written description."* Furthermore, *it is well established that "the test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation." United States v. Telectronics, Inc., 857 F.2d 778, 785, 8*

USPQ2d 1217, 1223 (Fed. Cir. 1988). This has been the primary test of enablement since 1916 (see Mineral Separation v. Hyde, 242 U.S. 261, 270 (1916)). *The determination that "undue experimentation" would have been needed to make and use the claimed invention is not a single, simple factual determination (In re Wands, 858 F.2d 731, 8 USPQ2d 1400 (Fed. Cir. 1988)). Factors which need to be considered include: the nature of the invention, the state of the prior art, the predictability or lack thereof in the art, the amount of direction or guidance present, the presence or absence of working examples, the breadth of the claims, the relative skill of those in the art and the quantity of experimentation needed* (hereinafter referred to as the Wands factors). *A conclusion of lack of enablement means that, based on the evidence regarding each of the above factors (the Wands factors), the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation (In re Wright, 999 F.2d 1557,1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)).* Errors in the claim rejections caused by the apparent failure to establish a prima facie case of a lack of enablement include:

Error #1) – Is a failure to acknowledge that no evidence has been presented to support the rejection of any claims for a lack of enablement. As noted above, rejection under §112 first paragraph requires a preponderance of evidence and express findings of fact. In spite of this well known requirement, no facts have been identified and no evidence has been presented that excessive experimentation would be required and/or that the full scope of the claimed invention has not been described. In place of the required evidence, the Examiner has made conclusory statements that one phrase "a physical object or substance" is allegedly not described in the specification. Affects all claims under this issue.

Error #2) Is a failure to acknowledge that the conclusory statement about "a physical object or substance" is incorrect. The specification describes a process for developing an application database for an enterprise. An enterprise is a physical object as are the elements of value. Furthermore, the Examiner has not identified any reason why the procedure used for developing an enterprise database cannot be used for any physical object. Affects all claims.

Error #3) - Is a failure to acknowledge that the Wands factors have not been considered. As noted above, rejection under §112 first paragraph requires a consideration of the Wands factors. In spite of this well known requirement, the Examiner has not completed a single aspect of the required Wands factor analysis. Affects all claims.

Error #4) Is an apparent failure to consider the evidence that has been presented. Evidence that the Examiner has apparently ignored includes: a) the summary of claimed subject matter

and b) a declarations submitted in support of this application, the declarations represent the only known independent review of the patent specification by someone with average skill in the relevant arts under either the pre or post KSR standards for determining the possession of said level of skill. Although the expert providing the declaration has considerable expertise in the data management, the Examiner has apparently chosen to ignore the contents of this declaration which completely rebuts the basis for the claim rejections (see Evidence Appendix, pages 103 – 106). Affects all claims.

Since the prima facie case to support the claim rejections has not been established, no rebuttal was (or is) required.

Error 5 - Is a failure to acknowledge that *"there is no requirement that the words in the claim must match those used in the specification disclosure,"* and that the use of words in a claim that do not match those used in the specification does not comprise the incorporation of new matter *(see In re Robert Skvorecz, CAFC 2008-1221).* This is particularly true when the term describes one of a plurality of modes for utilizing an invention described in the specification as it is well established that *"the enablement requirement is met if the description enables any mode of making and using the claimed invention" (see Invitrogen Corp. v. Clontech Labs, Inc., 429 F.3d 1052, 1058 (Fed. Cir. 2005) where the Court referenced Engel Industries, Inc. v. Lockformer Co. 946 F.2d 1528 (Fed. Cir. 1991).* Affects all claims.

Errors 6 through 8 – The claim rejections are based on 35 U.S.C. §112 first paragraph which states: *The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for an enablement rejection include:

Error #6) Is a failure to acknowledge the fact that the specification meets the requirements of 35 U.S.C. §112 first paragraph. As illustrated by the preceding discussion of errors 1 through 5, the enablement rejection appears to be based of a non-existent standard for written description enablement. Affects all claims.

Error #7) Is a failure to acknowledge the fact that the claim rejections have been authored by individuals who appear to lack the level of skill in the art required to author such rejections. It is well established that the *"hypothetical 'person having ordinary skill in the art' to which the*

claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art" *Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988).* It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Bielinski, Davis or Srivastava as a reference in support of a rejection for the claimed inventions for the reasons described previously. Another indication of the Examiner's apparent lack of understanding of the scientific and engineering principles applicable to the pertinent art can be found in the almost two thousand (2,000) errors identified in the claim rejections in the instant Appeal Brief. Affects all claims.

Error #8) – Is a failure to acknowledge that the claim rejections for an alleged lack of enablement are non statutory. The instant application incorporated a patent by reference that described an integrated database (see related appeal for 10/166,758 for confirmation). If any deficiencies in the written description were actually identified, the proper response in accordance with 37 CFR 1.57 would be to note that material from the cross referenced patent shall be considered incorporated by reference as to the inadvertently omitted portion of the specification or drawing(s) instead of issuing and arbitrary and capricious rejection for a lack of enablement. Please see MPEP 608.01(p) and MPEP 2163.07(b) for details re: U.S.P.T.O. policy in this regard. Affects all claims.

Errors 9 and 10 – In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #11) Is a failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 8 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the lack of enablement rejections of claim 64, claim 65, claim 67, claim 68 and claim 69 and that as a result the rejections fail to meet the substantial evidence standard.

Error #12) Is a failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the enablement rejection of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

a) as detailed above under errors 1 through 6, there is no evidence to support the rejection of a single claim;

b) there is no rational connection between the statutory requirements for enablement, the agency fact findings and the rejection of the claims (see errors 7 through 10), and

c) prior agency fact-findings have shown that 35 U.S.C. 112 first paragraph requirements for enablement are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of a lack of enablement can not be properly established. As noted in error 85 under Issue 1, the actions taken by the U.S.P.T.O. with respect to the instant application do not appear to have any statutory basis and are therefore moot.

As detailed above, the Examiner has based the claim rejections under this issue on 12 errors in the facts and the law. When the 12 errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 8 is eighty four (84). Because of these errors, the claim rejections do not meet either standard of the APA and the prima facie case of a lack of enablement cannot be properly established.

Issue 9 – Whether claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63 are indefinite under 35 USC 112, second paragraph?
The claims are patentable because the claim rejections are based on almost a hundred errors in the facts and in the law. Because of these errors, the arguments presented by the Examiner fail to establish a prima facie case of claim indefiniteness for every rejected claim as detailed below.

<u>Errors 1 through 5</u> – It is well established that: *the definiteness of claim language must be analyzed, not in a vacuum, but in light of: (A) The content of the particular application disclosure; (B) The teachings of the prior art; and (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. In reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent. See, e.g., Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 1379, 55 USPQ2d 1279, 1283 (Fed. Cir. 2000). See also In re Larsen, No. 01-1092 (Fed. Cir. May 9, 2001). Errors in the claim*

rejections caused by the apparent failure to establish a prima facie case of claim indefiniteness include:

Error #1) – Is a failure to acknowledge that no evidence has been provided to indicate that the rejected claims do not *particularly point out or distinctly claim the disclosed invention to someone of average skill in the art*. In particular, all the claim rejections are based on conclusory statements. Affects all claims

Error #2) - Is a failure to acknowledge that *"there is no requirement that the words in the claim must match those used in the specification disclosure"* and that the use of words in a claim that do not match those used in the specification does not comprise the incorporation of new matter *(see In re Robert Skvorecz, CAFC 2008-1221)*. Affects all claims.

Error #3) - Is a failure to acknowledge that virtually all of the terms used in the rejected claims have well recognized meanings which allows the reader to infer the meaning of the entire claim with reasonable confidence *(see Bancorp Services, L.L.C. v. Hartford Life Ins. Co., 359 F.3d 1367, 1372, 69 USPQ2d 1996, 1999-2000 (Fed. Cir. 2004)*. Affects all claims.

Error #4) - Is a failure to acknowledge that the rejected claims do not contain any terms that do not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable (Halliburton Energy Services, Inc. v. M-I LLC, 514 F.3d 1244, 1255,85 USPQ2d 1663 (Fed. Cir. 2008) and Halliburton, 514 F.3d at 1246, 85 USPQ2d at 1658 (Citing Biomedino, LLC v. Waters Techs. Corp., 490 F.3d 946, 950 (Fed. Cir, 2007). In particular:

a) the conclusory statement about "a physical object or substance" is incorrect. The specification describes a process for developing an integrated, application database for an enterprise. An enterprise is a physical object, and

b) the conclusory statement about the term "as required" is incorrect. As described in the specification, the exact steps required to transform data from different sources into an integrated database will vary depending upon the exact status of the data in the source databases.

By providing a clear, well documented process that highlights the relevant principles, the specification provides an objective standard for determining the scope of the claimed invention (see Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1356. (Fed. Cir. 2005). Evidence to support these assertions can be found in declarations included in the Evidence Appendix. The declarations represent the only known independent review of the instant patent specification and claims by an individual with average skill in the relevant arts under either the

pre or post KSR standards for determining the possession of said level of skill. It completely rebuts the Examiner's contentions regarding the claims (see Evidence Appendix, pages 103 – 106). Affects all claims.

Error #5) – Is a failure to acknowledge that the Examiner has failed to establish a prima facie case of indefiniteness by failing to consider the rejected claims as a whole. The claim rejections all rely on conclusory statements regarding a portion of a claim. The complete claims provide additional context that helps define the metes and bounds of the claimed invention. Affects all claims.

Errors 6 through 8 – The claim rejections are based on 35 U.S.C. §112 second paragraph which states: *The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for an indefinite claim rejection include:

Error #6) Is a failure to acknowledge the fact that the rejected claims meet the requirements of 35 U.S.C. §112 second paragraph. As illustrated by the preceding discussion of errors 1 through 5, the indefinite claim rejections appear to be based on an unknown and non-existent standard for claim definiteness. Affects all claims.

Error #7) Is a failure to acknowledge the fact that the claim rejections have been authored and/or approved by individuals who does not appear to have the level of skill in the art required to author valid claim rejections. It is well established that: *the definiteness of claim language must be analyzed, not in a vacuum, but in light of … The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.* It is also well established that the *"hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art" Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988).* It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Bielinski, Davis and/or Srivastava references in support of the rejection for the claimed inventions for the reasons described previously. Another indication of the apparent lack of understanding of the scientific and engineering principles can be found in the nearly two thousand (2,000) errors identified in the claim rejections in the instant Appeal Brief. Affects all claims.

Error #8) – Is a failure to acknowledge that the alleged indefiniteness of the claims may be a product of the Examiner's apparent lack of understanding of the relevant rules and statutes. The instant application incorporated a number of applications by reference. In accordance with 37 CFR 1.57, the proper response to the identification of an allegedly unsupported claim limitation would be to first require that pertinent material from the cross referenced patent applications be added to the specification instead of issuing an arbitrary and capricious rejection for indefiniteness. In accordance with 37 CFR 1.57 any such material (if identified) would be automatically be considered incorporated by reference. Affects all claims.

Errors 9 and 10 – In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Error #9) Is a failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through error 8 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the rejections for indefiniteness for claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 70 and/or claim 71 and that as a result the rejections fail to meet the substantial evidence standard.

Error #10) Is a failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the rejection of claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 70 and/or claim 71 for indefiniteness also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

a) as detailed above under errors 1 through 5, there is no evidence that the claims are indefinite;

b) there is no rational connection between the statutory requirements for claim definiteness, the agency fact findings and the rejection of the claims (see errors 6 through 8),

c) there is no rational connection between the rejection for claim indefiniteness and the prior agency fact findings associated with U.S. Patent Application 10/166,758, and

d) prior agency fact-findings have shown that 35 U.S.C. 112 requirements for written description are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law

comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of claim indefiniteness can not be properly established. As noted in error 85 under Issue 1, the actions taken by the U.S.P.T.O. with respect to the instant application do not appear to have any statutory basis and are therefore moot.

As detailed above, the Examiner has based the claim rejections under this issue on ten errors in the facts and the law. When the ten (10) errors are multiplied by the number of claim rejections affected by each error, the total number of errors associated with the rejection of claims under Issue 9 is one hundred ten (110). Because of these errors, the claim rejections do not meet either standard of the APA and the prima facie case cannot be properly established.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case that a single claim is indefinite.

8. Conclusion

The Appellant notes that with respect to the prosecution of the instant application, it appears that the U.S.P.T.O. has not fully complied with the requirements set forth in the APA, 35 U.S.C. 3 and 35 U.S.C. 131. A valid patent application rejection requires substantial evidence (Gartside, 203 F.3d at 1312). As described in the preceding section, the March 31, 2009 Office Action does not contain any evidence that would support the rejection of a single claim. However, related appeals and the March 31, 2009 Office Action for the instant application do provide substantial evidence that: those authoring/signing the Office Action do not appear to have the requisite level of skill in the pertinent arts, those authoring the Office Action do not adhere to any of the well established requirements for authoring valid claim rejections, and that those authoring the Office Action appear to have based the claim rejections on legal standards that are not applied during the review and allowance of similar applications filed by larger companies.

For the reasons detailed above, the Appellant respectfully but forcefully contends that each claim is patentable. Therefore, reversal of all rejections is courteously solicited.

Respectfully submitted,

Asset Trust, Inc.

/B.J. Bennett/

B.J. Bennett, President

Dated: February 15, 2010

9. Claims Appendix

36. A computer implemented enterprise method, comprising:

preparing data representative of an enterprise for use in processing, and

transforming at least a portion of the data into a model of an enterprise market value by an element and category of value by completing a series of multivariate analyses that utilizes said data

where the categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof,

where the model of enterprise market value identifies and outputs a tangible contribution of each element of value to each category of value, and

where the elements of value are selected from the group consisting of alliances, brands, channels, customers, employees, intellectual property, partnerships, processes, vendors and combinations thereof.

37. The method of claim 36 that further comprises completing activities selected from the group consisting of: completing an analysis of enterprise financial performance, optimizing one or more aspects of enterprise financial performance, simulating an enterprise financial performance, optimizing a future enterprise market value, quantifying a future enterprise market value, creating a management report, valuing an enterprise market sentiment, calculating a real option discount rate, valuing a real option, valuing a share of enterprise stock, determining a target share price and combinations thereof.

38. The method of claim 37 where a financial performance optimization further comprises identifying one or more changes that will optimize one or more aspects of financial performance where said aspects of financial performance are selected from the group consisting of revenue, expense, capital change, cash flow, real option value, future market value, market sentiment value, market value and combinations thereof.

39. The method of claim 36 wherein the method further comprises completing a series of multivariate analyses that are selected from the group consisting of identifying one or more previously unknown item performance indicators, discovering one or more previously unknown value drivers, identifying one or more previously unknown relationships between one or more value drivers, identifying one or more previously unknown relationships between one or more

elements of value, quantifying one or more inter-relationships between value drivers, quantifying one or more impacts between elements of value, developing one or more composite variables, developing one or more vectors, developing one or more causal element impact summaries, identifying a best fit combination of a predictive model algorithm and one or more element of value impact summaries for modeling enterprise market value and each of the components of value, determining a net element impact for each category of value, determining a relative strength of the elements of value between two or more enterprises, developing one or more real option discount rates, calculating one or more real option values, calculating an enterprise market sentiment value by element and combinations thereof.

40. The method of claim 39 wherein a predictive model algorithm is selected from the group consisting of neural network; classification and regression tree; generalized autoregressive conditional heteroskedasticity, regression; generalized additive; redundant regression network; rough-set analysis; Bayesian; multivariate adaptive regression spline and support vector method.

41. The method of claim 36 wherein data representative of an enterprise are obtained from systems selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, estimating systems, intellectual property management systems, process management systems, supply chain management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, purchasing systems, web site systems, the Internet, external databases and combinations thereof.

42. The method of claim 36 wherein the method further comprises using one or more composite applications to complete the processing.

43. The method of claim 36 wherein a model of enterprise market value further comprises a combination of component and category of value models selected from the group consisting of up to three predictive component of value models, a real option discount rate model, a real option valuation model, a market sentiment model by element of value and combinations thereof.

44. The method of claim 36 where preparing transaction data for use in processing further comprises integrating said data in accordance with a common schema where the common schema is defined by a CORBA metadata or an xml metadata.

45. The method of claim 36 that further comprises identifying one or more changes that will optimize a future market value portion of said enterprise market value.

46. A program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to perform an element method, comprising:

preparing data representative of an organization for use in processing,

transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a current operation and a real option category of value,

and

reporting the value contribution of the elements of value using an electronic display or a paper document.

47. The program storage device of claim 46 where elements of value are selected from the group consisting of alliances, brands, channels, customers, customer relationships, employees, intellectual property, partnerships, processes, production equipment, vendors and vendor relationships, and combinations thereof.

48. The program storage device of claim 46 where a tangible value contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element of value impacts on other elements of value.

49. The program storage device of claim 46 where determining a value contribution for each of one or more elements of value to a real option category of value further comprises:

identifying one or more elements of value that make a causal contribution to an organization market value,

computing a difference between a real option value calculated using the company cost of capital as the discount rate and a value calculated using a real option discount rate comprised

of a base discount rate plus a risk factor for each element of value that makes a causal contribution to organization market value; and

assigning the value difference to the different elements of value based on their relative contribution to a calculated difference in the two discount rates.

50. The program storage device of claim 46 where the element of value contributions are identified by learning from the data.

51. The program storage device of claim 46 wherein the discount rate for a real option valuation comprises a base discount rate plus a risk factor for each element of value that makes a causal contribution to an organization market value.

52. The program storage device of claim 46 where modeling enterprise financial performance further comprises:

a) identifying one or more value drivers for each element of value,

b) developing one or more element impact summaries from said value drivers for market value and each component of value,

c) identifying a best fit combination of element impact summaries and predictive model algorithm for modeling market value and each component of value,

d) determining a relative strength for each of the elements of value causal to market value change vis a vis competitors,

e) calculating a real option discount rate using the relative element strength information for the elements that support the real option,

f) calculating a real option value and identifying a contribution to real option value by element of value using said real option discount rate, and

g) identifying a net element contribution to enterprise market value by category of value by combining the results from the processing completed in steps a through f.

53. The program storage device of claim 46 where the calculated value for each element of value further comprises a value for a point in time within a sequential series of points in time.

54. The program storage device of claim 46 wherein the net relative contribution for each element of value to each category of value further comprises a net causal contribution.

55. A computer implemented future market value method, comprising:

preparing data representative of an organization for use in processing, and

transforming at least a portion of the identified data into a causal model of each of one or more categories of an organization value that calculate and output a tangible value contribution of each of one or more elements of value to a future market value and each of the categories of organization value

where the categories of value comprise a current operation and a category of value selected from the group consisting of real options, market sentiment and combinations thereof, and

where the elements of value are selected from the group consisting of alliances, brands, channels, customers, customer relationships, employees, intellectual property, partnerships, processes, vendors and combinations thereof.

56. The method of claim 55 wherein the discount rate for a real option valuation comprises a base discount rate plus a risk factor for each element of value that is causal to an organization market value.

57. The method of claim 55 that is enabled by the use of a flexible system architecture where said architecture further comprises data that has been integrated in accordance with a common xml schema and independent components of application software that can be combined to process said data as required to produce useful results.

58. The method of claim 55 where a net contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element impacts on other elements of value within said category of value.

59. The method of claim 55 where a causal model of an element of value contribution to an organization value further comprises a plurality of models selected from the group consisting of predictive component of value models, predictive market value models, relative element strength models, real option discount rate models, real option valuation models, market sentiment models and combinations thereof.

60. The method of claim 55 where a net contribution for each of one or more elements of value further comprises a direct contribution to a value of a category of value net of any impact on other elements of value.

61. The method of claim 55 where the one or more categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof.

62. The method of claim 55 where the future market value portion of organization market value further comprises a summation of values selected from the group consisting of the real option value, the portion of current operation value caused by elements of value, the portion of market sentiment value caused by elements of value and combinations thereof.

63. The method of claim 55 where the value driver changes that will optimize future market value are identified by algorithms selected from the group consisting of monte carlo algorithms, genetic algorithms, multi criteria optimization algorithms and combinations thereof.

64. A composite application method for data processing, comprising:
using two or more independent components of application software to produce one or more useful results by transforming data representative of a physical object or substance into a predictive model that has a utility in managing or monitoring a real world activity of said object or substance
where said data has been aggregated from two or more systems in accordance with a common model or schema defined by an xml metadata standard.

65. The method of claim 64 where the independent components of application software can be flexibly combined as required to support the development of one or more useful results.

67. The method of claim 64 where the independent components of application software complete processing selected from the group consisting of: analysis, attribute derivation, capitalization, causal analysis, classification, clustering, count linkages, data acquisition, data conversion, data storage, data transformation, element life estimation, indicator selection, induction, keyword counting, keyword match identification, locate linkages, relative strength determination, statistical learning, valuation, vector generation and combinations thereof.

68. The method of claim 64 that produces useful results selected from the group consisting of: element contribution determination, element impact quantification, element valuation, enterprise financial performance analysis, enterprise financial performance optimization, enterprise financial performance simulation, future market value optimization, future market value quantification, management reporting, real option discount rate calculation, real option valuation, share price valuation, sub-element clustering, target share price determination and combinations thereof.

69. The method of claim 64 where two or more systems are selected from the group consisting of accounts receivable systems, accounts payable systems, advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, estimating systems, intellectual property management systems, process management systems, supply chain management systems, vendor management systems, operation management systems, sales management systems, human resource systems, capital asset systems, inventory systems, invoicing systems, payroll systems, purchasing systems, web site management systems, the Internet, external databases and combinations thereof.

72. An organization system, comprising a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to complete a computer implemented market value accounting method, comprising:

preparing a plurality of data representative of an organization for use in processing,

transforming at least a portion of the data into a model each of one or more categories of an organization value that identify and output a tangible contribution of each of one or more elements of value to the categories of organization value by completing a series of analyses where the categories of value further comprise a current operation category of value and a category of value selected from the group consisting of real option, market sentiment and combinations thereof,

using the tangible contribution for each element of value to identify a market value for each element of value, and

reporting the value of each element of value in a balance sheet format

where the reported value is a value for a specific point in time within a sequential series of points in time.

73. The system of claim 72, wherein the method further comprises including a value for one or more financial assets in a report with a balance sheet format.

74. The system of claim 72 that further comprises wherein the method further comprises:

    tracking a change in a value of each of one or more elements of value over time, and

    including the calculated changes in value of each element of value in an income statement or a cash flow statement.

75. The system of claim 72, wherein the elements of value are customers and elements of value selected from the group consisting of alliances, brands, channels, employees, intellectual property, partnerships, processes, vendors, vendor relationships and combinations thereof.

10. Evidence Appendix

GERONTOLOGY

Unlearning Is Problem

Jobs that require new techniques become progressively harder for those over 30 to learn to do satisfactorily, suggesting that tasks requiring speed and unlearning are unsuitable.

▶ A BIGGER PROBLEM for older people who want to go on working is not learning new things so much as unlearning things that they have learned in the past.

Studies showing this have been made by Dr. Jack Botwinick, psychologist of the Clinical Center, National Institutes of Health, Bethesda, Md.

If what you have been doing is unlike what you are going to do in the future, you will have to unlearn a good deal of what you have been doing, Dr. Botwinick pointed out. This problem of unlearning, which is the biggest problem of learning new things, is true even at 30 and more so at ages 40, 50, 60 and on into the higher ages.

A person past 60 can do well on his own until he gets to a late age, but if there is increasing management policy for automation, for example, requiring the man to learn something new for his job, unlearning what he was doing very well may be the biggest problem.

A more familiar example that Dr. Botwinick gave was that of an older person learning to drive a non-gearshift automobile. He can do it, but it takes longer for the older person to stop reaching for the clutch than for a younger person learning the same thing.

A process of adaptation is related to the process of learning and unlearning. What has been adequate and appropriate at one time, but is no longer so, must be eliminated. The older the person, the harder it is to eliminate inappropriate or inadequate behavior, because, again, it involves an unlearning process.

Implications of the situation's social aspects are that older people should be able to do well if they continue doing what they have been doing, in the way of a job or other activities.

This is particularly true if the older person is a superior person, and if what he does involves verbal material.

For example, a person who works in teaching, unless he has to learn new processes and new methods of teaching, should be able to go on doing a good job as he gets older, whereas a person whose work involves manual or other kinds of physical activity may have more difficulty as he gets older.

Every living creature gets slower as he gets older, man is not the only animal that slows down with age, Dr. Botwinick said.

The group studying the aging process at the Clinical Center think the slowing is not only a question of muscles and a nerve reaction, but also a matter of the thinking

process, as well as of complex behavior and skill.

This means, Dr. Botwinick said, that jobs requiring speed and unlearning are not suitable for older persons, whereas jobs requiring accuracy and recurring repetitive processes are work at which older people will do relatively well.

Science News Letter, February 4, 1956

TECHNOLOGY

New Transistor Operates At Very High Frequencies

▶ A NEW TRANSISTOR that operates at frequencies three times higher than others recently announced has been developed.

Because of its very high frequency characteristics, the transistor is expected to be widely used in guided missiles and electronic "brains."

Heart of the tiny amplifying device is

the center layer, or "base," which is only 50-millionths of an inch thick.

It is made at Bell Telephone Laboratories in New York by a new fabricating method that uses the process of diffusion to control minute amounts of impurities sandwiched onto the base layer.
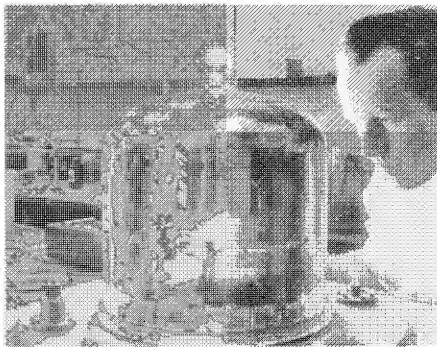
The narrower the base layer can be made, the higher the frequency at which the transistor will operate.

Transistors are widely used to replace vacuum tubes as low-frequency amplifiers, and the newly developed device broadens their field of application to include both black and white and color television transmission as well as missiles and computers.

Experimental units of the new device have amplified by 100 to one currents across a band 20,000,000 cycles wide. Either amplification or the number of communication channels can be made three times that of other transistors. When the frequency band is cut in half, power amplification is doubled. Available transistors have a frequency cut-off of up to ten megacycles, while the new ones work to 600 megacycles.

C. A. Lee of Bell Laboratories perfected the techniques of sandwiching with germanium. C. S. Fuller and M. Tanenbaum have applied the diffusion technique in making the new transistor from silicon. Dr. William Shockley and George C. Dacey directed the work leading to the development.

Science News Letter, February 4, 1956

MAKING TRANSISTOR BY DIFFUSION—Electrical contacts are being made to germanium by vaporizing a metal onto the surface, using the process of diffusion to control the amount of impurities. The germanium bar is under vacuum in the jar while a Bell Telephone Laboratories technician performs one of the operations in making the new transistor, which shows great promise for use at very high frequencies.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.: 10/743,616

Applicant: Jeff S. Eder

Filed: March 16, 2002

Examiner: Jennifer Liversedge

Art Unit: 3692

Docket No.: AR - 61

Customer No: 53787

DECLARATION UNDER RULE 132

I, Dr. Peter Brous, do hereby declare and say:

My home address is 17221 NE 8th Street, Bellevue, WA 98008. I have a B.S. degree in Finance from the University of Connecticut and a PhD in Finance from the University of Oregon.

I have worked in the finance field for 26 years, concentrating in the areas of corporate performance measures, business valuation, capital budgeting, and real option analysis. I have been a professor of finance at Albers School of Business and Economics at Seattle University for 16 years and was recently honored to hold the Dr. Khalil Dibee Endowed Chair.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc or its licensee Kantrak, Inc. I previously met the inventor, who is now the President of Kantrak, Inc. briefly on October 16, 2007.

On October 25, 2007, I was given a copy of U.S. Patent Application 10/743,616 entitled "A performance management platform" filed in the United States Patent Office on March 16, 2002. Until that time I had not read the patent application. I have studied the entire specification in order to closely analyze the claims and drawings. I am familiar with the language of the claims and conversant with the scope thereof. I understand the invention as claimed.

On September 29, 2008 I was given a copy of "the 1986-1988 Stock Market Investor Sentiment or Fundamentals", by Michael N. Baur, Socorro Quintero and Eric Stevensi published in Managerial and Decision Economics, Vol. 17, No. 3 (May - Jun., 1996). Until that time I had not read the article or discussed it with anyone. However, I have read many articles on the subject of market value and market sentiment. I have a strong understanding of the concepts of market value and market sentiment and have been teaching these concepts for over 10 years. I have studied the entire article and I am totally familiar with the language of the article with the scope thereof.

Based on my experience and education in the field of finance, I have concluded that the article by Baur et al. (hereinafter, the Baur article) has no relevance to the market sentiment calculation and analysis described in patent application 10/743,616. There are several reasons for this.

1. Patent application 10/743,616 describes a method for calculating and analyzing market sentiment for a single firm. The Baur article describes an attempt to determine if investor sentiment related to the market as a whole had an effect on changes in prices for the S&P 500 as a whole during the period from 1986-1988;

2. Patent application 10/743,616 defines market sentiment for a single firm as the difference between the market value of firm's equity and debt and the value of the firm's current operation, real options, excess financial assets and derivatives. The Baur article does not analyze the difference the market value of S&P 500's equity and debt

and the value of the S&P 500's current operation, real options, excess financial assets and derivatives as it only attempts to analyze changes in prices;

3. Patent application 10/743,616 teaches the analysis of the market sentiment level calculated for a firm using the method described in item 2 in order to identify the elements of value and/or external factors that contribute to the calculated levels. The Baur article does not teach or suggest anything about identifying the elements of value and/or external factors that contribute to market sentiment or investor sentiment;

4. Patent application 10/743,616 describes a method for calculating and analyzing market sentiment for a single firm at a specific point in time. The Baur article describes an attempt to determine if changes in investor sentiment related to the market as a whole affects weekly changes in prices for the S&P 500 as a whole over a period of several years;
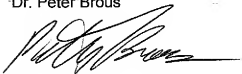
5. The Baur article cannot be used to make any inferences about investor sentiment (or market sentiment) at the firm level because increases in investor sentiment for some firms in the S&P 500 could offset decreases in investor sentiment for other firms within the S&P 500 over the time period being analyzed;

6. Patent application 10/743,616 does not teach or suggest anything about identifying a proxy for market sentiment for the market as a whole. The Baur article relies on an assumption that a measure of the change in the discount percentage on closed end funds is a proxy for investor sentiment related to the market as a whole. The Baur article also acknowledges that changes in closed end fund discounts may not be the correct proxy for measuring general investor sentiment;

7. The only conclusion that can reasonably be drawn from the Baur article is that the assumed proxy for general investor sentiment (described in item 6) did not have a significant statistical relationship to the observed price changes for the S&P 500 between 1986 and 1988.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Dr. Peter Brous

Date: October 17, 2008

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.:	10/287,586
Applicant:	Jeff S. Eder
Filed:	November 5, 2002
Examiner:	Yehdegga Retta
Art Unit:	3693
Docket No.:	AR - 38
Customer No:	53787

DECLARATION UNDER RULE 132

I, Rick Rauenzahn, do hereby declare and say:

My home address is 529 Calle don Leandro, Espanola, New Mexico. I have a B.S. degree in chemical engineering from Lehigh University, an S.M. degree in chemical engineering from The Massachusetts Institute of Technology and a Ph.D. in chemical engineering from The Massachusetts Institute of Technology. I have worked in the mathematical modeling field for 26 years concentrating in the disciplines of fluid mechanics, turbulence modeling, numerical methods for partial differential equations, radiation hydrodynamics, and strength of materials. I also have extensive knowledge of computer system administration, particularly for Windows-based, Linux, and UNIX systems. I have been employed by Los Alamos National Laboratory and Molten Metal Technologies for the past 25 years.
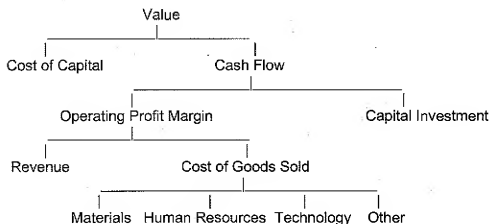
I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc. or with its licensee Kantrak, Inc. As described in prior declarations I have met the inventor who is the President of Kantrak.

On November 26, 2008 I was given a copy of "How to sort out the premium drivers of post-deal value" from Mergers and Acquisitions from July/August 1993, Vol. 28, Iss.1; pg. 33, 5 pgs by Daniel W. Bielinski (hereinafter, Bielinski), 'Neural Networks Enter the World of Management Accounting'"; Management Accounting; Montvale, NJ; May 1995, 5 pages, by Carol Brown, James Coakley, & Mary Ellen Phillips (hereinafter Brown), pages 56, 172 and 173 from <u>Creating shareholder value</u>; by Alfred Rappaport, The Free Press, U.S.A., Declaration Under Rule 132 for Application 10/287,586, dated July 21, 2008 by Dr. Peter Brous and a copy of application 10/287,586. On May 12, 2009 I was given a copy of "What is Value Based Management?" by Timothy Koller. Until that time I had not read the articles, the book pages, the declaration or the application although I have read other applications that are similar including application 09/761,670, application 09/688,983, application 10/287,586 and application 10/821,504. Application 10/298,021 is a continuation of application 09/938,874. I am totally familiar with the language of the claims and conversant with the scope thereof. I completely understand the invention as claimed.

It is my understanding that the Examiner for this application has proposed combining the teachings of Bielinski together with the teachings of Brown to replicate the neural network models developed by the above referenced application. Based on my experience and training in the field of mathematical modeling and electronic data processing, I have concluded that the proposed combination of Bielinski and Brown would destroy the ability of the Value Based Management method taught by Bielinski to function.

Understanding why the functionality of the system described by Bielinski would be destroyed requires some background. Neural networks complete their processing by using a squashing function (usually a sigmoid) that combines data inputs in a linear or non-linear fashion as best fits the data before producing an output. Squashing functions typically have output values between 0 and 1. For prediction models the output node is sometimes given a linear activation function to provide forecasts that are not limited to the zero to one range. The tree based analysis of cash flow taught by Bielinski relies on a finite number of inputs to each node of a tree. The inputs to each node are mathematically combined to produce a value that is passed on up the tree for

mathematical combination in another node (Figure 2 in Bielinski confirms the linear nature of the model). For example, Bielinski discusses breaking the operating profit margin value driver into revenue minus cost of goods sold where the cost of goods sold is further broken down into materials, human resources, technology/capital and other (see diagram below). Bielinski labels these latter four cost categories operational value drivers.

```
                              Value
                                |
            _____|_____
            |                                       |
      Cost of Capital                          Cash Flow
                                                    |
                            _____|_____
                            |                                               |
                  Operating Profit Margin                          Capital Investment
                            |
            _____|_____
            |                               |
        Revenue                     Cost of Goods Sold
                                            |
                        _____|_____
                        |           |           |               |
                    Materials  Human Resources  Technology    Other
```

Replacing all or part of the tree with a neural network would destroy the ability of the tree to complete the processing required for the VBM analysis in a number of ways. Replacing part of the tree shown above with a neural network would destroy the ability to complete required processing. The reason for this is that the output value from a neural network (generally between 0 and 1) could not be used to produce the proper input value for the node at the next level as required to complete the mathematical processing of the tree. For example a neural network node could not subtract cost of goods sold from revenue to generate operating profit margin. Replacing the entire tree shown above with a neural network would exacerbate this problem as each intermediate node of the tree would receive only inputs between zero and one that could not combine to produce the required output values for use as inputs to higher level nodes. If the cash flow tree shown above was entirely replaced by a neural network (as claimed) where lower level nodes became nodes in hidden layers within the network, then the same problem with output values would prevent proper functioning at higher level nodes and additional problems would be created. One of these additional problems would be that the user would lose his or her ability to select the inputs to a

node because neural networks determine the combination of inputs that are best suited to produce output values for the next layer in the network during training. The user would also lose the ability to determine the number of nodes and their relationship for similar reasons. In all cases discussed above, the assumption of linearity that is implicit in the use of a tree could also be violated by substituting a neural network for any part of the tree.

Because the lowest level of the Value Based Management analysis method taught by Bielinski contains sub components of value such as production labor and material cost, the Bielinski model also teaches away from the modeling method disclosed in application 10/287,586 which has value drivers for elements of value at the lowest level, elements of value at the second level and subcomponents of value at the third level.

Another way in which Bielinksi teaches away from the method disclosed in application 10/287,586 and all other Asset Reliance applications I have reviewed is that Bielinski uses a single tree for both calculating the actual cash flow and identifying the accounts where the revenue, expense and capital charges are incurred.

The Asset Reliance applications I have reviewed create a series of predictive models (in the case of 10/287,586 the predictive model is a neural network model) that use element of value impact summaries as inputs in order to identify the contribution of different elements of value to each of the components of value and to other categories or segments of value (i.e. investments, market sentiment, derivatives). The percentages identified by the predictive model are then combined with the value of the component, category or segment value to calculate a value impact for each element of value.

Modifying Bielinski to use element impact summaries in place of account data would destroy the ability of the Bielinski invention to function as would replacing the tree with a predictive model.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these

statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,

Rick M. Rauenzahn

Date: May 16, 2009

Appl. No. :	10/743,616
Applicant :	Jeff S. Eder
Filed :	22 December 2003
Art Unit ::	3692
Examiner :	Jennifer Liversedge
Docket No. :	AR - 61
Customer No. :	53787

DECLARATION UNDER RULE 132

I, Dr. Peter Brous, do hereby declare and say:

My home address is 17221 NE 8th Street, Bellevue, WA 98008. I have a B.S. degree in Finance from the University of Connecticut and a PhD in Finance from the University of Oregon.

I have worked in the finance field for 25 years, concentrating in the areas of corporate performance measures, business valuation, capital budgeting, and real option analysis. I have been a professor of finance at Albers School of Business and Economics at Seattle University for 15 years and was recently honored to hold the Dr. Khalil Dibee Endowed Chair.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc or its licensee Knacta, Inc. I met the inventor, the President of Knacta, Inc.,

for the first time on October 16, 2007. I understand that Knacta, Inc. has a license to the intellectual property associated with this application. I have had extremeley brief discussion of this patent application and the article cited below with the inventor.

On October 25, 2007 I was given a copy of "How to sort out the premium drivers of post deal value", by Daniel Bielinski published in Mergers and Acquisitions in July of 1993. Until that time I had not read the article. However, I have read many articles on the subject of Value Based Management. I have a strong understanding of the concept and practice of Value Based Management and have been teaching this concept for over 10 years. I have studied the entire article and I am totally familiar with the language of the article with the scope thereof.

Based on my experience and education in the field of finance, I have concluded that the the Bielinski article and Value Based Management does not inherently describe or enable: the development of a computational model of enterprise market value by element of value and segment of value where the elements of value are selected from the group consisting of alliances, brands, channels, customers, customer relationships, employees, employee relationships, intellectual capital, intellectual property, partnerships, processes, production equipment, vendors and vendor relationships and the segments of value are selected from the group consisting of market sentiment, real option, derivative, excess financial asset.

There are several reasons for this:

1. As stated in the article VBM is similar to SVA. One of the ways it is similar is that it focuses on "value drivers" such as profit margin and growth instead of intangible assets as part of a tree based analysis of cash flow. Unlike SVA, VBM includes operational value drivers that drive the value drivers. However, these are generally not intangible elements of value. For example, Bielinski provides an example of breaking down profit margin by looking more closely at the cost of materials;

2. VBM is also similar to SVA in that it relies on the efficient market theory and this precludes the analysis of market sentiment;

3. SVA and VBM are tools that focus on the standard valuation model, a discounted cash flow model, that does not even consider the value associated with flexibility or decision making that is done sequentially and conditionally based on the arrival of new information. The valuation of this flexibility is the basis for valuation using real option analysis; and

4. Neither VBM or SVA address the valuation of derivatives.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,

Dr. Peter Brous
Date: 10/31/2007

Serial No.:	09/764,068
Applicant:	Jeff S. Eder
Filed:	January 19, 2001
Examiner:	Jennifer Liversedge
Art Unit:	3692
Docket No.:	AR - 19
Customer No:	53787

DECLARATION UNDER RULE 132

I, Gregory Cusanza, do hereby declare and say: my home address is 8604 233rd Place NE, Redmond, WA 98053 and I have a B.S. degree in computer science from Cal Poly San Luis Obispo.

I have worked in the data processing field for 16 years, concentrating in the disciplines of data storage, data conversion and enterprise processing. I also have extensive knowledge of computer system administration, particularly for Windows, Linux, and Unix systems. I have been employed by a corporation that was recently purchased by EMC for 12 years, Knacta for 1.5 years and Kantrak, Inc. for the seven months. I own 5% of the issued common stock in Kantrak, Inc.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc. I first met the inventor in April of 2004. 1 joined Kantrak, a company run by the inventor in February 2008. Knacta was also run by the inventor. Kantrak has a license to the intellectual property associated with this application.

On August 30, 2007, I was given a copy of U.S. Patent Application 10/441,385 filed in the United States Patent Office on May 20, 2003. U.S. Patent Application 09/764,068 is the parent of application 10/645,009 and as such has the same specification and drawings. I have studied the entire specification in order to closely analyze the claims and drawings. I am familiar with the language of the claims and conversant with the scope thereof. I understand the invention as claimed.

On October 2, 2008 I was given a copy of U.S. Patent 6,549,922 by Srivastava et al (hereinafter, Srivastava) that is entitled "System for collecting, transforming and managing media metadata" and a copy of U.S. Patent 7,249,328 by Russell T. Davis (hereinafter, Davis) that is entitled "Tree view for reusable data markup language". Until that time I had not read either of these patents and I have not discussed them with anyone.

Based on my experience and education in the field of data storage, data conversion and enterprise processing, I have concluded that:

1. U.S. Patent Application 09/764,068 describes a process for integrating data into an application database and the database can properly be called an integrated database;

2. U.S. Patent Application 09/764,068 describes a process for integrating data into an application database. It would be obvious to anyone of average skill in the art that the integrated database produced by this process is the output of this process; and

3. U.S. Patent Application 09/764,068 describes a process for transforming data from disparate systems into an integrated application database and anyone of average skill in the art of data processing who read the specification would fully understand the scope of the activities associated with the transformation.

I have also attached a drawing that graphically illustrates the difference between the data integration invention described in U.S. Patent Application 09/764,068 and the Davis invention.

Finally, I will reiterate that Srivastava uses the term "metadata mapping" to describe the process of matching a summary description for a file derived from metadata for the file to a schema. 09/764,068 uses the term "metadata mapping" to describe the process of mapping from source database metadata to application database metadata. In other words, Srivastava teaches away from the meaning of metadata mapping disclosed in 09/764,068.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,
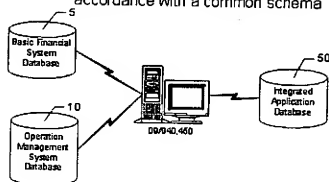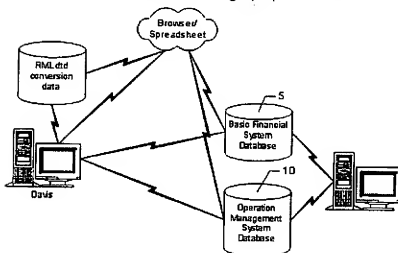
9.28 - 2009

Gregory Cusanza
Date: April 28, 2009

Maps and converts source data to an integrated database in accordance with a common schema

Combines source data and conversion information in an application to produce a graph/presentation

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How much information is too much information?

Has anyone ever told you during a conversation: "Stop, that`s too much information?" Well University of Queensland psychologists have discovered just how much too much information actually is. Emeritus Professor Graeme Halford and his colleagues from UQ`s School of Psychology have discovered most humans cannot represent relations between more than four variables.

Their study, How Many Variables Can Humans Process?, pushed a group of 30 academics to their mental limits.

Participants were given incomplete descriptions of interactions between variables, with an accompanying set of bar graphs representing the interactions. They were then required to complete the descriptions so that they correctly described the graphs.

"At the level of the four-way interactions, participants made comments such as "Everything fell apart and I had to go back"," Professor Halford said.

"Only chance levels of performance were obtained for five-way interactions."

The results have implications for the design of high-stress work environments such as the coordination of fire-fighting operations.

"If the number of variables to be considered exceeds human processing capacity then the worker will drop his or her mental bundle and become unable to proceed," Professor Halford said.

"More seriously, the worker may revert to a simplified version of the task that does not take all aspects into account and therefore may make the wrong decision.

"This type of problem is particularly acute in tasks that have to be performed under time pressure or where unusual combinations of circumstances are likely to arise.

"Modern high-technology industries produce many situations of this kind because of the number of variables that have to be taken into account in decision making."

Professor Halford`s team included Dr Rosemary Baker and Dr Julie McCredden from UQ`s School of Psychology and Professor John D Bain from Griffith University.

Their results showed that as the complexity of the interaction increased,

performance and confidence levels dropped significantly.

"While all levels of complexity are logically possible, the evidence suggests that they are not cognitively manageable," Professor Halford said.

Professor Halford said complex ideas were conceptual structures built in the temporary working area of the mind called the working memory. His findings are the outcome of a decade of research, investigating tasks that push cognitive processing to the limits.

"Four way interactions require humans to represent relations between relations between relations between pairs of bars; which can be reframed mathematically as a four-dimensional task," he said.

"We found that four dimensions are the most that humans can conceive of.

"Therefore, if the world was five-dimensional, rather than three, we would not be able to understand it."

Source: The University of Queensland

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FINANCIAL TIMES

Close

Is it back to the Fifties?

Print

By John Authers

Published: March 24 2009 20:12 | Last updated: March 24 2009 20:12

"My mother is 75," said Jon Stewart, the US late-night comedian, at the end of his already famous interview with Jim Cramer, the television stock market pundit. "And she bought into the idea that long-term investing is the way to go. And guess what?"

"It didn't work," replied Mr Cramer.

The interview this month, in which Mr Stewart humiliated his guest, has earned a place in American cultural history. Mr Stewart was articulating a broad sense of betrayal among the populace that the faith all had been told to put in equities had been misplaced.

That loss of faith spreads beyond retail investors. The crash has forced professional investors and academics to question the theoretical underpinnings of modern finance. The most basic assumptions of the investment industry, and the products they offer to the public, must be reconsidered from scratch. Indeed, the very reason for the industry to exist – a belief that experts make the smartest decisions on where people's money will do best – is up for scrutiny as a result.

Invest your tuppence wisely: a father pays out pocket money circa 1966. The children of that era, now at retirement age, are finding their holdings are far short of what they expected

Mr Stewart was right about long-term investment, and not just for septuagenarians. US stocks have fallen more than 60 per cent in real terms since the market peaked in 2000. Anyone who started saving 40 years ago, when the postwar "baby boom" generation was just joining the workforce, has found that stocks have performed no better than 20-year government bonds since then, a forthcoming article by Robert Arnott for the Journal of Indexes shows. These people want to retire soon and the "cult of the equity" has let them *down*.

To find a period that does produce an outperformance requires a span reaching back a lot further. The 2009 Credit Suisse *Global Investment Returns Yearbook* shows that since 1900 US stocks have averaged an annual real return of 6 per cent, compared with 2.1 per cent for bonds – while in the UK, equities have beaten gilts with a return of 5.1 per cent against 1.4 per cent. The problem is that they can perform worse than bonds for periods longer than a human working lifetime.

Further, recent experience challenges that basis of modern finance, the "efficient markets hypothesis", which in its strongest form holds that prices of securities always reflect all known information. This implies that stocks will react to each new piece of information, yet without following any set trend – a description that cannot be applied to the events of the past 18 months. On these foundations, theorists worked out ways to measure risk, to put a price on options and other derivatives and to maximise returns for a given level of risk.

This theory also showed that stocks would outperform in the long run. Stocks

Below: how retail investors are modifying their behaviour

are riskier than asset classes such as government bonds (which have a state guarantee), corporate bonds (which have a superior claim on a company's resources) or cash. So the argument was that those who invested in them would in the long run be paid for taking this risk by receiving a higher return. That is *now* in question.

http://www.ft.com/cms/s/680b46b0-18a7-11de-bec8-0000779fd2ac,dwp_uuid=ceecf842-3...   3/27/2009

11. Related Proceedings Appendix - Attached opinion appears to be based largely on an assumption that VBM is different than SVA in a number of areas where they are in fact the same (see Evidence Appendix, pages 95 - 99). Opinion also appears to contain a number of clear errors because:

1) The cited documents failed to make the invention as a whole obvious by teaching away from the claimed methods. Bielinski teaches: efficient market in place of an inefficient market, a tree based analysis in place of a network analysis and three determinants of market value (cash flow, cash flow risk and growth) in place of the elements of value as determinants of value. Brown teaches: scoring in place of regression and that 40 external factors determine market value in place of elements of value as determinants of value.

2) The cited combination failed to teach one or more limitation for every claim.

3) Modifying the cited documents to replicate the claimed functionality would require changes in the principles of operation for the cited inventions and destroy their ability to function. Bielinski would have to change from a tree to a network and it is well known that substituting a neural network sigmoid in place of the tree node would destroy the ability of the tree to function. Brown would have to change to using elements of value as determinants of value and use regression in place of scoring.

4) The cited documents teach away from their own combination. Bielinski specifically prohibits the use of projections while the cited portion of Brown teaches a method with only one function: projecting changes in stock prices.

5) Bielinski specifically states that the disclosed VBM method follows the principles of Shareholder Value Analysis (SVA). One of the well known principles of SVA is the efficient market theory. In spite of these facts, the BPAI said there was no evidence that Bielinski taught the efficient market theory.

6) Bielinski specifically states that the disclosed VBM method follows the principles of SVA. One of the well known principles of SVA is the tree based analysis of cash flow. In spite of these facts, the BPAI said there was no evidence that Bielinski taught the tree based analysis of cash flow.

7) Bielinski specifically states that the disclosed VBM method follows the principles of SVA. One of the well known principles of SVA is that there are 3 determinants of market value. In spite of these facts, the BPAI said there was no evidence that Bielinski taught that there were 3 determinants of market value.

_____

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

_____

Ex parte JEFFREY SCOTT EDER

_____

Appeal 2007-2745
Application 09/761,671
Technology Center 3600

_____

Decided: August 29, 2007

_____

Before TERRY J. OWENS, HUBERT C. LORIN, and ANTON W. FETTING, *Administrative Patent Judges.*

FETTING, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF CASE

Jeffrey Scott Eder (Appellant) seeks review under 35 U.S.C. § 134 of a Final rejection of claims 69-103, the only claims pending in the application on appeal.

We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6.

We AFFIRM.

The Appellant invented a way to calculate and display a forecast of the impact of user-specified or system generated changes in business value drivers on the other value drivers, the elements, the components, the financial performance and the long term value of a commercial enterprise that utilizes the information from a detailed valuation of the enterprise (Specification 9:2-7).

An understanding of the invention can be derived from a reading of exemplary claim 69, which is reproduced below [bracketed matter and some paragraphing added].

69. A current operation modeling method, comprising:

[1]

[a] integrating transaction data

    [i] for a commercial enterprise

    [ii] in accordance with a common data dictionary;

[b] using a neural network model

    [i] to identify one or more value driver candidates

    [ii] for each of one or more elements of value from said data,

[c] using an induction model

    [i] to identify one or more value drivers from said candidates and

    [ii] define a contribution summary

        [1] for each element of value

        [2] for each of one or more aspects of a current operation financial performance

        [3] using said value drivers, and

[d] creating a plurality of network models

    [i] that connect the elements of value

    [ii] to aspects of current operation financial performance

1   [iii] using said contribution summaries

2   [2]

3   [a] where the elements of value are selected from the group consisting
4   of

5   [i] brands,

6   [ii] customers,

7   [iii] employees,

8   [iv] intellectual capital,

9   [v] partners,

10   [vi] vendors,

11   [vii] vendor relationships and

12   [viii] combinations thereof,

13   [b] where the induction models are selected from the group consisting
14   of

15   [i] lagrange,

16   [ii] path analysis and

17   [iii] entropy minimization,

18   [c] where the network models support automated analysis through
19   computational techniques and

20   [d] where the aspects of current operation financial performance are
21   selected from the group consisting of

22   [i] revenue,

23   [ii] expense,

24   [iii] capital change,

25   [iv] cash flow,

26   [v] future value,

27   [vi] value and

28   [vii] combinations thereof.

29

1

2   This appeal arises from the Examiner's Final Rejection, mailed June 13, 2006.

3   The Appellant filed an Appeal Brief in support of the appeal on October 3, 2006.

4   An Examiner's Answer to the Appeal Brief was mailed on January 9, 2007. A

5   Reply Brief was filed on January 27, 2007.

6   PRIOR ART

7   The Examiner relies upon the following prior art:

8   Daniel W. Bielinski, *How to sort out the premium drivers of post-deal value*,

9   Mergers and Acquisitions, Jul/Aug 1993, Vol. 28, Iss. 1, pg. 33, 5 pgs. (Bielinski)

10 Carol E. Brown, James Coakley, and Mary Ellen Phillips, *Neural networks enter*

11 *the world of management accounting*, Management Accounting, May 1995, Vol.

12 76, Iss. 11, p. 51, 5 pgs. (Brown)

13 The Appellant relies upon the following prior art, already of record:

14 Alfred Rappaport, *Creating Shareholder Value*, A Guide for Managers and

15 Investors, pp. 39, 70, 171, and 172, ISBN 0-684-84410-9, 1998 (Rappaport)

16   REJECTION

17 Claims 69-103 stand rejected under 35 U.S.C. § 103(a) as unpatentable over

18 Bielinski and Brown.

19   ISSUES

20 Thus, the issue pertinent to this appeal is whether the Appellant has sustained

21 its burden of showing that the Examiner erred in rejecting claims 69-103 under

22 35 U.S.C. § 103(a) as unpatentable over Bielinski and Brown.

1   FACTS PERTINENT TO THE ISSUES

2   The following enumerated Findings of Fact (FF) are believed to be supported

3 by a preponderance of the evidence.

4   *Claim Construction*

5   01.   Entropy minimization is an induction algorithm that, starting with

6   nothing, adds variable to composite variable formula as long as they

7   increase the explainability [sic] of result (Specification, 47:Table 23).

8   02.   LaGrange is an induction algorithm that is designed to identify the

9   behavior of dynamic systems and uses linear regression of the time

10   derivatives of the system variables (Specification, 47:Table 23).

11   03.   Path Analysis is an induction algorithm that is essentially equivalent

12   to multiple linear regression that finds the least squares rule for more

13   than one predictor variable (Specification, 47:Table 23).

14   *Bielinski*

15   04.   Bielinski is directed towards describing how Value Based

16   Management (VBM), an advancement in discounted cash flow

17   modeling, centers on what specific steps can be taken operationally and

18   strategically to add value to a target organization (Bielinski, 1:Abstract).

19   05.   Bielinski describes how sensitivity analysis of past results offers clues

20   to what can be done in the future and which value drivers should receive

21   the most attention to achieve optimal rewards. The VBM technique

22   allows the analyst to figure key decision making trade-offs, since

23   attention to one driver may generate negative effects on others or 2 or

1   more drivers may have to be varied in concert to produce the best results

2   (Bielinski, 1:Abstract).

3   06.   Bielinski describes Value-Based Management (VBM), which keys on

4   a target's historical operations rather than future projections. VBM also

5   can calculate the results of trade-offs when decision makers must choose

6   between a series of factors that can be changed to enhance post

7   acquisition value (Bielinski, 1:Bottom ¶ - 2:Top line).

8   07.   Bielinski describes the best-known valuation tool designed to

9   facilitate value creation and cash flow enhancement as Shareholder

10   Value Analysis (SVA), introduced in the 1980s by Prof. Alfred

11   Rappaport of Northwestern University (Bielinski, 2:First full ¶).

12   08.   SVA may be defined as a two-step process. First, a discounted cash

13   flow business valuation is performed. A projection of future cash flow

14   (including a residual) is developed and discounted at an appropriate rate,

15   usually the cost of capital, to arrive at an indicated value. Second, key

16   factors (or value drivers), such as growth, profit margins, etc., are varied

17   systematically to test the sensitivity of the indicated business value to

18   each driver. Standard SVA sensitivity analysis changes each value driver

19   plus or minus 1%, although analysts now often use "relevant ranges" and

20   different percentages for upside and downside swings to reflect

21   prevailing business realities (Bielinski, 2:First full ¶).

22   09.   SVA has limitations often magnified into constraints that necessitate

23   modifying standard SVA analysis. Thus, Rappaport describes and

24   distinguishes VBM, a first cousin to SVA, which has resulted from these

25   modifications. Bielinski provides an abbreviated overview of VBM and

1   describes how it differs from the traditional SVA framework (Bielinski,

2   2:Second and third full ¶'s).

3   10.   Rather than use projections of future cash flow like SVA, the VBM

4   framework utilizes historical cash flow. Five years of historical cash

5   flow are added up to arrive at a cumulative baseline cash flow number.

6   That is in contrast to SVA's method of discounting future cash flows to

7   reach an indicated value. Instead of testing the sensitivity of a value

8   based on a projection, VBM tests the sensitivity of the historical cash

9   flow. VBM tells the executive how much more or less cash flow would

10   be in the bank today if certain events had occurred differently or if the

11   company had operated differently in the past five years (Bielinski,

12   2:Fifth and sixth full ¶'s).

13   11.   The use of actual historical data, rather than projections, has proven

14   useful in testing the impact of alternative scenarios against the reality of

15   actual events. It also has served as a catalyst to identify and implement

16   actions that generate improvements. As long as a company's

17   fundamental structure does not change going forward, the results provide

18   meaningful insight regarding the probable outcomes of future strategic

19   action, to the extent that risk is not increased, an executive may

20   reasonably assume that an increase from historical cash flow trends

21   likely would translate into enhanced value (Bielinski, 2:Seventh full ¶).

22   12.   VBM utilizes drivers that are more directly linked to operations. For

23   example, rather than use operating profit margin as a broad value driver,

24   a VBM analysis on a manufacturer would include a breakdown of cost

25   of goods sold by key components (Bielinski, 2:Eighth full ¶).

13. Bielinski provides an example of a mix for VRM analysis including materials, human resources, technology and capital, and other costs of goods sold as value drivers (Bielinski, 2:Bottom five full ¶'s).

14. VBM essentially utilizes SVA principles but advances the basic techniques by incorporating historical data, operations-linked value drivers, and concurrent changes in multiple value-drivers (Bielinski, 3:Third full ¶).

15. Bielinski shows the sensitivity of the baseline cash flow to changes in key factors. Showing how results might have turned out differently if operating or strategic changes been effected in the recent past suggests improvements that can be made in the future (Bielinski, 3:Sixth full ¶).

16. Sensitivity analysis can show how changes in key cost and operating components can impact cash flow. One striking conclusion is that the areas where the big dollars are do not always offer the greatest opportunities to improve cash flow and value (Bielinski, 3:Seventh and eighth full ¶).

17. Bielinski describes how SVA can tie strategic changes directly to manufacturing by future initiatives to control costs, eliminating overspecification and establishing better value chain management (Bielinski, 3:Bottom ¶).

18. And if both the acquirer and target utilize VBM in constructing a projection, the two sides might come close to reaching a consensus on what constitutes a "realistic" projection of future performance (Bielinski, 4:Bottom ¶).

19.   With VBM, sensitivity analysis of past results offers clues to what can be done in the future and which value drives - e.g., sales growth, profit margins, productivity, etc. - should receive the most attention to achieve the optimal rewards. Additionally, the VBM technique allows the analyst to figure key decision making trade-offs, since attention to one driver may generate negative effects on others or two or more drivers may have to be varied in concert to produce the best results (Bielinski, 5:Keys to creating value).

Brown

20.   Brown is an accounting journal article describing how artificial intelligence (AI) is implemented in business practices. Three of the most common methods parallel the way people reason: rules (inference procedures), cases (case-based reasoning), and pattern matching (neural networks). These methods may be used separately or in combination and currently are being used to solve a variety of business tasks (Brown 51:Left col., Bottom ¶ - Center col.).

21.   Neural networks use pattern matching. The financial services industry with its large databases has fielded several successful neural network applications, and neural networks based on information about customers or potential customers have proved effective. If large databases exist with which to train a neural network, then use of that technology should be considered. For a neural network the large database can be used as the equivalent of the human expert (Brown 52:Center col., Second ¶).

22. Neural networks are used for forecasting future sales and prices, estimating future costs, and planning future schedules and expenditures (Brown 53:Left col., Forecasting and Scheduling).

23. An air carrier's improved scheduling makes aircraft operations more predictable, reduces delays, and reduces fuel costs by shortening the time aircraft spend waiting for available gates. More efficient scheduling raises the number of flights by each aircraft, increases revenue, provides better management of disruptions, and improves passenger service (Brown 53:Left col.-middle col., Forecasting and Scheduling).

24. A provider of hospital supplies, uses a neural network to identify the key characteristics of the best customers and searches the inactive customer list for the highest probability purchasers from those who are inactive. Neural networks also help with customer service and support (Brown 53:Center col., First full ¶).

25. As businesses reorganize based on customer needs, neural networks can help them analyze past business transactions so they can understand their customers' buying patterns. One neural network for database mining has been tailored for database marketing (Brown 53:Center col., Second full ¶).

26. Many systems also have been developed to help investors and investment companies manage investments in securities. One company has a neural network it uses as a decision aid in stock purchases for mutual funds. The neural network makes a very accurate forecast about 10% of the time; the other 90% of the time it makes no forecast at all. Another company uses a neural network to manage the $100 million

1   equity portfolio of its pension fund. Forty indicators are used to rank the

2   expected future returns of 1,000 equities. Currently owned stocks are

3   sold and are replaced by those with future return rating over a certain

4   cutoff, which results in an 80% monthly turnover. The portfolio return,

5   net of transaction costs, exceeds that of the Standard & Poor's 500 index.

6   Other firms use neural network to predict the S & P 500 index and the

7   performance of stocks and bonds to help market traders in making their

8   buy, hold, and sell decisions. The system recognizes patterns in market

9   activity before they are apparent to a human, which may mean millions

10   in trading profits (Brown 56:Center col., Investments).

11   *Rappaport*

12   27.   Rappaport describes techniques for creating shareholder value

13   (Rappaport Title).

14   28.   A component of the cost of equity is a risk premium. One way of

15   estimating the risk premium for a particular stock is by computing the

16   product of the market risk premium for equity (the excess of the

17   expected rate of return on a representative market index such as the

18   Standard & Poor's 500 stock index over the risk-free rate) and the

19   individual security's systematic risk, as measured by its beta coefficient

20   (Rappaport 39:Middle full ¶).

21   29.   Rappaport teaches that three factors determine stock prices: cash

22   flows, a long-term forecast of these cash flows, and the cost of capital or

23   discount rate that reflects the relative risk of a company's cash flows.

24   The present value of a company's future cash flows, not its quarterly

25   earnings, determines its stock price (Rappaport 70:Last full ¶).

30.   Rappaport teaches that business value depends on seven financial value drivers: sales growth, operating profit margin, incremental fixed capital investment, incremental working capital investment, cash tax rate, cost of capital, and value growth duration. While these drivers are critical in determining the value of any business, they are too broad to be useful for many operating decisions. To be useful, operating managers must establish for each business the micro value drivers that influence the seven financial or macro value drivers.

31.   Rappaport teaches that an assessment of these micro value drivers at the business unit level allows management to focus on those activities that maximize value and to eliminate costly investment of resources in activities that provide marginal or no potential for creating value. Value driver analysis is a critical step in the search for strategic initiatives with the highest value-creation leverage. Isolating these key micro value drivers enables management to target business unit operations that have the most significant value impact and those most easily controlled by management.

32.   Rappaport teaches that the first step of a value driver analysis is to develop a value driver "map" of the business. This involves identifying the micro value drivers that impact sales growth, operating profit margins, and investment requirements. Armed with a better understanding of micro value driver relationships, the next step is to identify the drivers that have the greatest impact on value.

33.   Rappaport provides an illustrative table (Rappaport 172:Figure 9-3. Micro and Macro Value Drivers) that presents the sensitivity of

1   shareholder value to changes in selected drivers for retail as well as

2   industrial marketing (Rappaport 172:Top ¶).

3   34.   Rappaport teaches that most managers believe they can identify the

4   key drivers for their business. However, these drivers may in many cases

5   be appropriate for a short-term-earnings-driven business rather than an

6   organization searching for long-term value, Experience shows that value

7   driver sensitivities are not always obvious. Therefore, quantifying

8   sensitivities is a valuable exercise for both operating and senior

9   management (Rappaport 172:First full ¶).

PRINCIPLES OF LAW

Claim Construction

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550 (CCPA 1969); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364, (Fed. Cir. 2004).

Although a patent applicant is entitled to be his or her own lexicographer of patent claim terms, in *ex parte* prosecution it must be within limits. *In re Corr*, 347 F.2d 578, 580, 146 USPQ 69, 70 (CCPA 1965). The applicant must do so by placing such definitions in the Specification with sufficient clarity to provide a person of ordinary skill in the art with clear and precise notice of the meaning that is to be construed. *See also In re Paulsen*, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994) (although an inventor is free to define the specific terms used to describe the invention, this must be done with reasonable clarity, deliberateness, and precision; where an inventor chooses to give terms uncommon meanings, the inventor must set out any uncommon definition in some manner

within the patent disclosure so as to give one of ordinary skill in the art notice of the change).

Obviousness

A claimed invention is unpatentable if the differences between it and the prior art are "such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a) (2000); *KSR Int'l v. Teleflex Inc.*, 127 S.Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14, 148 USPQ 459, 466 (1966).

In *Graham*, the Court held that that the obviousness analysis is bottomed on several basic factual inquiries: "[(1)] the scope and content of the prior art are to be determined; [(2)] differences between the prior art and the claims at issue are to be ascertained; and [(3)] the level of ordinary skill in the pertinent art resolved." 383 U.S. at 17, 148 USPQ at 467. *See also KSR Int'l v. Teleflex Inc.*, 127 S.Ct. at 1734, 82 USPQ2d at 1391. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* 127 S.Ct. at 1739, 82 USPQ2d at 1395.

"When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or in a different one. If a person of ordinary skill in the art can implement a predictable variation, § 103 likely bars its patentability." *Id.* 127 S. Ct. at 1740, USPQ2d at 1396.

"For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve

similar devices in the same way, using the technique is obvious unless its actual
application is beyond his or her skill." *Id.*

"Under the correct analysis, any need or problem known in the field of
endeavor at the time of invention and addressed by the patent can provide a reason
for combining the elements in the manner claimed." 127 S. Ct. at 1742, USPQ2d at
1397.

<div align="center">ANALYSIS</div>

Claims 69-103 rejected under 35 U.S.C. § 103(a) as unpatentable over Bielinski
and Brown.

The Appellant argues these claims as a group. Although the Appellant
nominally contends each of the independent claims individually, each of the
contentions for the remaining independent claims refers back to the arguments for
claim 69.

Accordingly, we select claim 69 as representative of the group.
37 C.F.R. § 41.37(c(1)(vii) (2006).

We initially construe claim 69. We find that claim 69 is divided into two parts,
[1] and [2]. Part [1] recites the method steps, which, overall perform element [1.a]
integrating data, by step [1.b] using a neural network model to identify a fist set of
candidates, from which step [1.c] further identifies a set of drivers, and defines a
set of contribution summaries, finally, in step [1.d] creating network models with
the summaries. Thus, claim 69 contains three steps, [1.b-d] that are employed
within step [1.a]. Steps [1.b-d] are necessarily sequential because each of [1.c] and
[1.d] requires output from the preceding step. Part [2] identifies components used

in the steps in part [1], and thus limits the terms those components are used in within part [1].

The Examiner found that Bielinski describes all of the elements of claim 69 except for the use of neural network models using the indicators and a portion of the data to identify value driver candidates. To overcome this deficiency, the Examiner found that Brown described valuation using neural networks and training neural network models for aspects of financial performance using indicators. The Examiner concluded that it would have been obvious to a person of ordinary skill in the art to have combined Bielinski and Brown to take advantage of neural networks to increase accuracy of models (Answer 3:Bottom ¶ - 4:Full page).

The Appellant contends that Bielinski[1] and Brown: (1) teach away from the proposed combination; (2) would require a change in operating principle; (3) if combined, would destroy the ability of one of the methods to function; (4) fails to make the invention as a whole obvious; and (5) fails to meet any of the criteria for establishing a prima facie case of obviousness (Br. 12:Third ¶).

Teaching Away

(1) The Appellant argues that Rappaport's description of only three market value determinants, is incompatible with Brown's forty determinants (Br. 12:Bottom ¶).

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[1] The Appellant relies on Rappaport to support many of its arguments regarding Bielinski, apparently treating Rappaport as having been incorporated by reference within Bielinski, based on Bielinski's described usage of Rappaport's Shareholder Value Analysis (Bielinski, 30:First full ¶). The Brief somewhat confusingly attributes text actually found in Rappaport to Bielinski. In this opinion, when we refer to Rappaport's text, based on either the Appellant's contentions, or on our own analysis and fact finding, we attribute that text to Rappaport.

1   We initially find that here, as throughout the arguments in the Brief, the

2 Appellant has somewhat rhetorically attributed the teachings of Rappaport, and in

3 particular certain assertions within Rappaport, to Bielinski as a device to discredit

4 the combination of Bielinski and Brown. While Bielinski refers to the teachings of

5 Rappaport, as we noted in footnote [1], this does not necessarily mean that

6 everything taught and asserted by Rappaport is necessarily embraced by

7 Bielinski's teachings. In particular, Bielinski distinguishes its VBM technique

8 from Rappaport's SVA technique (FF 09).

9   As to the merits of the Appellant's argument, although Rappaport describes

10 that three factors determine stock prices (FF 29), we find that Bielinski describes

11 several market value drivers and implies there are more (FF 19). Also, we find that

12 Bielinski describes drivers of varying scope (FF 12), such that the broadest drivers

13 taught by Rappaport can be broken down into more drivers more directly linked to

14 operations.

15   On the other hand, the forty indicators taught by Brown that the Appellant

16 contends are incompatible relate to portfolio analysis across multiple companies

17 (FF 26) rather than analysis of a single company as taught by Bielinski (FF 04). It

18 is hardly surprising and totally irrelevant that an application comparing multiple

19 companies might use more indicators than a single company.

20   The Appellant has not sustained its burden of showing the Examiner erred.

21   (2) The Appellant argues that Bielinski's teachings imply an efficient market,

22 which is incompatible with an inefficient market implied by Rappaport (Br. 13:Top

23 ¶).

24   The Appellant bases this argument again on Rappaport rather than Bielinski as

25 such, pointing to Rappaport's description of a market risk quantifier, beta (FF 28).

The Appellant contrasts this with Brown's use of neural networks to select individual stocks in a portfolio (FF 26). Thus, the Appellant has, as in the previous argument, assigned an SVA teaching by Rappaport to Bielinski that is not necessarily applicable to Bielinski's VBA, and compared Bielinski's single company analysis to Brown's example of portfolio analysis. More to the point, we find there is nothing fundamentally incompatible between a measure of market risk and portfolio selection as suggested by the Appellant, particularly since it is widely known that the purpose of portfolios is to manage risk. None of the three references make any connection between their teachings and either an efficient or inefficient market hypothesis.

The Appellant has not sustained its burden of showing the Examiner erred.

(3) The Appellant argues that Bielinski's reliance on long term cash flow analysis is incompatible with Brown's short term analysis, and that Bielinski specifically teaches away from the use of projections for any aspect of analysis (Br. 13:Second ¶).

We again find that the Appellant compared Bielinski's single company analysis to Brown's example of portfolio analysis, as the short term analysis pointed to by the Appellant (Brown 56:reference to 80% monthly turnover) is again within the investment analysis examples of Brown.

We further find that the Appellant is conflating the two distinct operations performed by Bielinski's VBM. In particular, Bielinski first tests the sensitivity of long term historical cash flow to different operating assumptions about past operations (FF 10). Then Bielinski applies the results of this sensitivity analysis to future strategic action (FF 11). Contrary to the Appellant's contention, Bielinski specifically teaches the use of projections in this phase of the analysis.

Bielinski does not characterize the time frame for analysis of future action, but we find that such projected time frames typically include relatively short term time frames because of the inherent uncertainty in projections that increases with time frame. We further find that there is nothing in Bielinski that would suggest that the time frame for the projection phase of the analysis is incompatible with a shorter time frame.

The Appellant has not sustained its burden of showing the Examiner erred.

(4) The Appellant argues that Rappaport's use of a tree based model topology is incompatible with Brown's network topology (Br. 13:Third ¶).

The Appellant has made a broad contention of the incompatibility of these methods without a specific showing of the nature of their incompatibility. The Appellant bases this argument again on Rappaport rather than Bielinski as such, contending that Rappaport implicitly teaches a tree methodology. We find that nothing in Rappaport specifically refers to a tree based model topology. Rappaport presents a figure of a tree diagram to represent the hierarchical nature of organizational costs and activities (FF 33), but makes no representation as to how this is incorporated within the model.

Even if Bielinski's VBM were to employ a tree based methodology, we find nothing inconsistent with employing a neural network within each of the branches of the tree's analysis. Further, we find nothing incompatible with assigning neural network analysis to Bielinski's phase of finding driver candidates as in claim 69 element [1.b.] and assigning a tree based induction model to identify drivers as in element [1.c.]. The Appellant has not made any contention otherwise.

The Appellant has not sustained its burden of showing the Examiner erred.

(5) The Appellant argues that Bielinski's usage of sensitivity analysis is incompatible with Brown's neural network scoring for the same data (Br. 13:Bottom ¶).

We again find that the Appellant compared Bielinski's single company analysis to Brown's example of portfolio analysis, as the scoring pointed to by the Appellant (Brown 56:reference to ranking of future returns of stocks) is again within the investment analysis examples of Brown.

Further, Bielinski applies the results of its sensitivity analysis to future strategic action (FF 11). Similarly, Brown applies its results to future strategic actions (FF 22). We find nothing incompatible between using the results of sensitivity analysis, their implications for future actions, and the results of neural networks for suggesting future actions.

The Appellant goes on to argue that Bielinski and Brown are measuring the same thing and there would be no point in using two methodologies to measure the same thing (Br. 13:Bottom ¶). We find this is not an argument of incompatibility, but of so much compatibility as to be redundant. We further find that Bielinski and Brown base their analysis on different inputs (Bielinski using cash flows and Brown using large databases) and the use of different analytical methods to converge on a common result to reduce uncertainty is widely known and applied.

The Appellant has not sustained its burden of showing the Examiner erred.

Changing Principle of Operation

The Appellant argues that Bielinski and Rappaport's Shareholder Value Analysis (SVA) would change Brown's neural network because it would use a tree based analysis, acknowledge that the efficient market theory does not explain all

value changes, and acknowledge that cash flow explains only a portion of the value of an enterprise (Br. 14:Top ¶). The Appellant further argue that Bielinski's Value Based Management (VBM) would change Brown's strict reliance on historical cash flow and the related prohibition against using projections of any kind (Br. 14:Second ¶).

We find that these contentions are all repetitions of those made under the rubric of teaching away, *supra*, but couched as changing principles of operation, and our findings are the same. The Appellant has made no contention specifically demonstrating that the combination of Bielinske and Brown would necessarily change the principles of their operation, particularly since Brown's neural network might be used in performance of element [1.b.] and Bielinski's VBM in performance of [1.c.] of claim 69, thus not requiring any overlap of their operation.

The Appellant has not sustained its burden of showing the Examiner erred.

Destruction of Ability to Function

The Appellant argues that VBM requires that inputs to each node in a tree arithmetically combine to produce an input to a higher level in the tree. The Appellant contends that use of a neural network would destroy the ability to arithmetically generate the numbers required at each tree node. The Appellant similarly contends that the use of a tree would destroy the neural network's ability to function (Br. 14:Bottom ¶ - 15:Top ¶).

We find that these contentions are all repetitions of those made under the rubric of teaching away, *supra*, but couched as destroying the ability to function, and our findings are the same. The Appellant has made no contention specifically demonstrating that the combination of Bielinske and Brown would necessarily destroy the abilities of their operation, particularly since Brown's neural network

1 might be used in performance of element [1.b.] and Bielinski's VBM in

2 performance of [1.c.] of claim 69, thus not requiring any overlap of their operation.

3   The Appellant has not sustained its burden of showing the Examiner erred.

4   *Failure to Make Invention as a Whole Obvious*

5   The Appellant repeats the arguments regarding teaching away and concludes

6 that the invention is therefore not obvious as a whole (Br. 15:First full ¶).

7   We find that these contentions are all repetitions of those made under the rubric

8 of teaching away, *supra*, but couched as making the invention as a whole obvious,

9 and our findings are the same.

10   The Appellant has not sustained its burden of showing the Examiner erred.

11   *Failure to Make Prima Facie Case for Obviousness*

12   The Appellant argues (1) there is no evidence for the motivation to combine

13 the references; (2) there is no reasonable expectation of success for the same

14 reasons the combination would destroy their ability to function; and (3) the

15 combination fails to include optimization techniques (Br. 15:Bottom ¶ - 16:Top

16 three ¶'s).

17   We find that both Bielinski and Brown describe analytical techniques

18 employed to find drivers for improving organizational performance. Brown

19 teaches that neural networks may be used to analyze past business transactions so

20 they can understand customers' buying patterns, whereas Bielinski teaches how

21 VBM sensitivity analysis of past results offers clues to what can be done in the

22 future and which value drivers should receive the most attention to achieve optimal

23 rewards. Thus both are directed towards analysis of past business operations to

24 offer clues to changing future operations to improve business performance. It

would have been obvious to a person of ordinary skill in the art to have adapted techniques from each of Brown and Bielinski to provide the advantages of each technique in improving overall performance.

The Appellant has not sustained its burden of showing the Examiner erred.

Reply Brief

We find that the Appellant has made general allegations that the combination of Bielinski and Brown fails to teach or suggest any of the claim limitations of claims 77-103 for the first time in the Reply Brief. A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim. 37 C.F.R. 41.37(c)(1)(vii). A general allegation that the art does not teach any of the claim limitations is no more than merely pointing out the claim limitations. Thus, these claims fall along with claim 69.

The Appellant has not sustained its burden of showing that the Examiner erred in rejecting claims 69-103 under 35 U.S.C. § 103(a) as unpatentable over Bielinski and Brown.

CONCLUSIONS OF LAW

The Appellant has not sustained its burden of showing that the Examiner erred in rejecting claims 69-103 under 35 U.S.C. § 103(a) as unpatentable over the prior art.

On this record, the Appellant is not entitled to a patent containing claims 69-103.

1 <div align="center">DECISION</div>

2   To summarize, our decision is as follows:

3   • The rejection of claims 69-103 under 35 U.S.C. § 103(a) as unpatentable

4   over Bielinski and Brown is sustained.

5   No time period for taking any subsequent action in connection with this appeal

6 may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

7

8 <div align="center">AFFIRMED</div>

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